TECHNICAL MEMORANDUM



Monitored Natural Attenuation Monitoring – December 2019 OMC Plant 2 Site (OU4), Waukegan, Illinois WA No. 237-RARA-0528/Contract No. EP-S5-06-01

PREPARED FOR: Sarah Rolfes/U.S. Environmental Protection Agency (EPA)

PREPARED BY: CH2M HILL, Inc. (CH2M)

DATE: April 3, 2020
PROJECT NUMBER: 696001.CV.01

REVISION NO.: 0

Introduction

This memorandum documents the field activities and results associated with the monitored natural attenuation (MNA) groundwater sampling conducted in December 2019 at the Outboard Marine Corporation (OMC) Plant 2 Site (Operable Unit [OU] 4) in Waukegan, Illinois. Injections were conducted in April and May 2018 and included the treatment of two trichloroethene (TCE) hotspot and three lower-concentration source areas shown in Figure 1. The work is pursuant to Technical Direction Memorandum No. 1 received from EPA (dated July 17, 2017) authorizing a second injection event and pre- and post-injection monitoring to evaluate the performance of the treatment and the MNA sitewide remedy. As specified in EPA's Record of Decision (EPA 2009), the overall remedial action objective for the groundwater remedy is to reduce the concentrations of the chemicals of concern (TCE, cis-1,2-dichloroethene [cis-1,2-DCE], and vinyl chloride) to levels that would allow the groundwater to be used for residential purposes without restrictions.

The monitoring wells in the performance and sitewide well networks and analysis to be performed as part of the monitoring program were documented in the *Quality Assurance Project Plan Addendum III Letter* approved by EPA on April 5, 2019 (CH2M 2019).

Field Activities

The MNA groundwater sampling event was conducted from December 2 to 6, 2019, and included the following:

- Collected depth to water, water quality measurements, and groundwater samples from 34 performance monitoring wells and 29 sitewide monitoring wells. The sitewide wells include the 10 wells (well nests ST-MW1, ST-MW2, ST-MW3, ST-MW4, and ST-MW5) installed by SulTRAC around the polychlorinated biphenyl (PCB) containment cell and 6 wells (nests MW-3, MW-11, and MW-516) located on the Larsen Marine Services property. Table 1 and Figure 1 show the monitoring well locations.
- Managed groundwater purge water in 5-gallon buckets, and temporarily stored water in tanks and then treated it by the onsite water treatment system.
- The locations (63 locations) were sampled for analysis of volatile organic compounds (VOCs), dissolved metals (arsenic, iron, and manganese), and the MNA parameters (alkalinity, anions

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[chloride, nitrate, nitrite, and sulfide], dissolved gases [methane, ethane, and ethene] and total organic carbon [TOC]). Twenty-one of the 63 locations were also sampled for PCB analysis. The 21 locations sampled for PCBs included the 10 SulTRAC monitoring wells and 11 sitewide monitoring well locations along the eastern and southern site boundaries, which were previously approved by EPA. Figures 2a and 2b show the contaminant distribution based upon the total detected concentrations of TCE, cis-1,2-DCE, and vinyl chloride in the shallow and deep portions of the aquifer.

Groundwater Sampling

Groundwater samples were collected using low-flow methods as described in the quality assurance project plan (CH2M 2013). The monitoring wells were purged until the field parameters (temperature, specific conductance, dissolved oxygen, pH, oxidation reduction potential, and turbidity) were stable based on readings from a YSI multi-parameter flow-through cell. The low-flow parameters were recorded for each well (Attachment 1). Figures 3a and 3b show the water level elevations for the shallow and deep portions of the aguifer.

Samples requiring VOC and PCB analysis were submitted to a laboratory within EPA's Contract Laboratory Program, while MNA samples were sent to Katahdin Analytical Services of Scarborough, Maine.

Waste Management

Purge water from the sampling was containerized and treated by the water treatment system related to the onsite consolidation facility.

Personal protective equipment was doubled-bagged and placed with the general waste from the site for disposal.

Data Management and Evaluation

The field sample data were entered into EPA's Scribe software. The data were used to create chain-of-custody forms and for tracking purposes.

Following sample analysis, the Contract Laboratory Program laboratory transmitted the analytical data and supporting documentation to EPA for validation, after which, an electronic analytical report and an electronic and hard-copy validation reports were sent to CH2M. Following EPA's data validation, the CH2M project chemist reviewed the validation summaries and entered the qualifiers into the project database. Attachment 2 contains the data usability evaluation technical memorandum.

Analytical Results

Table 2 shows stabilized field parameter results for samples collected in December 2019. Table 3 contains analytical laboratory results for VOC, PCBs, dissolved metals, dissolved gases, TOC, and the MNA parameters.

Conclusions and Recommendations

The analytical results for TCE, cis-1,2-DCE, and vinyl chloride are relatively similar to the previously collected data from September 2019. The groundwater quality and analytical results from the previous monitoring (April 2014 through December 2016), March 2018 pre-injection, and August 2018 post-injection sampling event can be compared to evaluate the effectiveness of the supplemental treatment. CH2M recommends continuing quarterly groundwater performance monitoring with the purpose of evaluating the overall performance of the enhanced in situ biodegradation and in situ chemical reduction treatment in reducing chlorinated VOC concentrations in the groundwater.

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References

CH2M HILL, Inc. (CH2M). 2013. *Quality Assurance Project Plan, Revision 2, OMC Plant 2 Site, Waukegan, Illinois. WA No. 105-RARA-0528, Contract No. EP-S5-06-01.* March.

CH2M HILL, Inc. (CH2M). 2019. *Quality Assurance Project Plan Addendum III Letter, OMC Plant 2 Site, Waukegan, Illinois. WA No. 237-RARA-0528, Contract No. EP-S5-06-01*. April.

U.S. Environmental Protection Agency (EPA). 2009. *Record of Decision, Outboard Marine Corporation Superfund Site, Waukegan. Lake County, Illinois*. February.

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Tables

Table 1. Summary of Well IDs and Analytes for MNA Groundwater Sampling - December 2019

Monitored Natural Attenuation Monitoring - December 2019 OMC Plant 2 Site (OU4), Waukegan, IL

Well Number	FD	MS/MSD	voc	PCB	Gases ^a	Metals ^b	MNA ^c	Date Collected	Notes
MW-11D	Х		Х		Х	Х	Х	12/3/2019	Located in Larsen Marine property
/W-11S			Х		Х	Х	Х	12/3/2019	Located in Larsen Marine property
1W-3D			Χ	Χ	Х	Х	Х	12/3/2019	Located in Larsen Marine property
1W-3S			Χ		Χ	Х	Χ	12/3/2019	Located in Larsen Marine property
1W-501D			Χ	Χ	Χ	Χ	Χ	12/3/2019	
1W-501S			Χ	Χ	Χ	Χ	Х	12/3/2019	
/W-513D			Χ		Χ	Χ	Х	12/3/2019	
/W-513S			Χ		Х	Х	Х	12/3/2019	
/W-516D		Х	Χ		Х	Х	Х	12/2/2019	Located in Larsen Marine property
1W-516S			Х		Х	Х	Х	12/2/2019	Located in Larsen Marine property
1W-528D			Х		Х	Х	Х	12/4/2019	
1W-528S			Х		Х	Х	Х	12/4/2019	
1W-600D			Х		Х	Х	Х	12/6/2019	
1W-600S			Х		Х	Х	Х	12/6/2019	
1W-601D			Х		X	X	X	12/2/2019	
1W-601S		Х	X		X	X	X	12/2/2019	
1W-602D	Х	^	X		X	X	X	12/4/2019	
1W-602S	^		X		X	X	X		
								12/4/2019	
1W-603D			X		X	X	X	12/5/2019	
1W-603S			X		X	X	X	12/5/2019	
1W-604D			X		X	X	X	12/6/2019	
1W-604S			Х		Х	Х	Х	12/6/2019	
1W-605D	Х		Х		Х	Х	Х	12/5/2019	
1W-605S			Х		Х	Х	Х	12/5/2019	
1W-606D			Х		Х	Х	Х	12/6/2019	
1W-606S			Χ		Х	Х	Х	12/6/2019	
1W-607D			Χ		Х	Х	Χ	12/4/2019	
1W-607S			Χ		Χ	Χ	Χ	12/4/2019	
1W-610D			Χ	Χ	Χ	Χ	Χ	12/3/2019	
1W-610S			Χ	Χ	Χ	Χ	Χ	12/3/2019	
1W-612D			Χ		Χ	Х	Х	12/6/2019	
1W-612S	Х		Х		Х	Х	Х	12/6/2019	
1W-613D			Х	Х	Х	Х	Х	12/5/2019	
1W-613S			Х		Х	Х	Х	12/5/2019	
/W-614D			Х		Х	Х	Х	12/5/2019	
1W-614S			Х		Х	Х	Х	12/5/2019	
/W-615D			Х		X	X	X	12/4/2019	
1W-615S			X		X	X	X	12/4/2019	
1W-619D			X		X	X	X	12/3/2019	
1W-619S			X		X	X	X	12/3/2019	
1W-620D			X		X	X	X	12/4/2019	
1W-620S			X		X	X	X	12/4/2019	
1W-621D			X		X	X	X	12/6/2019	
1W-621S	Х		Х		Х	Х	Х	12/6/2019	
1W-623D			Х	Х	Х	Х	Х	12/3/2019	
1W-623S			Х	Χ	X	Х	Х	12/3/2019	
1W-624D			Χ	Х	X	X	Х	12/3/2019	
1W-624S	Х		Χ	Х	Х	Х	Х	12/3/2019	
/-5	Х		Х	Χ	Χ	X	Х	12/4/2019	Co-located with MW-622S (temp)
T-MW-1D			Χ	Χ	Χ	Χ	Χ	12/5/2019	SulTrac Installed Well
T-MW-1S			Х	Х	Х	Х	Х	12/5/2019	SulTrac Installed Well
T-MW-2D		Х	Х	Х	Х	Х	Х	12/4/2019	SulTrac Installed Well
T-MW-2S		Х	Х	Х	Х	Х	Х	12/4/2019	SulTrac Installed Well
T-MW-3D			Х	Х	Х	Х	Х	12/5/2019	SulTrac Installed Well
T-MW-3S			X	X	X	X	X	12/5/2019	SulTrac Installed Well
T-MW-4D			X	X	X	X	X	12/5/2019	SulTrac Installed Well
T-MW-4S			X	X	X	X	X		SulTrac Installed Well
								12/5/2019	
Γ-MW-5D			Х	Х	Х	Х	Х	12/4/2019	SulTrac Installed Well

Table 1. Summary of Well IDs and Analytes for MNA Groundwater Sampling - December 2019

Monitored Natural Attenuation Monitoring - December 2019

OMC Plant 2 Site (OU4), Waukegan, IL

					Dissolved	Dissolved			
Well Number	FD	MS/MSD	voc	PCB	Gases ^a	Metals ^b	MNA ^c	Date Collected	Notes
ST-MW-5S			Χ	Χ	Х	Χ	Χ	12/4/2019	SulTrac Installed Well
MW-625D			Χ		Х	Χ	Χ	12/5/2019	
MW-625S			Χ		Χ	Χ	Χ	12/5/2019	
MW-626D			Χ		Х	Χ	Χ	12/4/2019	
MW-626S			Χ		Х	Х	Х	12/4/2019	

Notes

Field duplicates collected for every 10 samples and MS/MSD for every 20 samples.

One field blank and one equipment blank collected.

FD = field duplicate, ID = identification, MS/MSD = matrix spike/matrix spike duplicate, MNA = monitored natural attenuation, PCB = polychlorinated biphenyl, VOC = volatile organic compounds

 $^{^{\}rm a}$ Dissolved gases include: methane, ethene, and ethane

^b Dissolved metals include: arsenic, iron, and manganese

^c MNA parameters include the following: alkalinity, nitrate/nitrite, chloride, sulfate, and sulfide

Table 2. Field Parameters, December 2019

OMC Plant 2 Site (OU4) - Waukegan, IL

		MW-003S	MW-003D	MW-011S	MW-011D	MW-501S	MW-501D	MW-513S	MW-513D	MW-516S	MW-516D	MW-528S	MW-528D	MW-600S	MW-600D	MW-601S
		12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/02/2019	12/02/2019	12/04/2019	12/04/2019	12/06/2019	12/06/2019	12/02/2019
Depth to Water	ft btoc	3.75	3.48	3.81	3.82	2.49	2.41	1.77	1.8	0.85	0.95	3.11	3.01	3.39	3.47	3.35
Dissolved Oxygen	mg/L	1.33	2.43	0.37	1.89	0.22	0.27	3.73	0.52	0.25	0.78	8.92	9.41	0.15	2.6	0.24
Electrical Conductivity	mS/cm	0.281	5.73	1.023	1.542	0.509	0.575	0.796	1.168	0.745	8.015	0.471	1.139	0.762	1.85	0.854
Flow Rate	mL/min	220	225	240	250	300	300	240	250	260	225	250	250	325	225	400
Oxidation Reduction Potential	mV	156.9	-149.2	17.8	-121.1	-83.1	-150.1	61	38.4	163.2	-138.9	177.9	115.7	4.7	199.6	-112.7
pH	pH units	6.84	7.25	7.13	7.15	7.29	7.52	7.09	7.24	7.11	7.31	7.76	7.08	7.11	7.05	7.41
Temperature	°C	7.97	10.32	8.03	9.32	7.24	10.17	9.34	11.11	8.98	11.76	8.55	11.05	9.03	10.33	8.15
Turbidity	NTU	1.9	0	0.8	4.5	1.6	0	0	6.2	0	0	0	2.1	0	0	0

Notes:

°C = degrees Celsius

ft btoc = feet below top of casing

mg/L = milligrams per liter

mL/min = millimeters per minute

mS/cm = milliSiemens per centimeter

mV = millivolts

NTU = Nephelometric turbidity units

Table 2. Field Parameters, December 2019

OMC Plant 2 Site (OU4) - Waukegan, IL

		MW-601D	MW-602S	MW-602D	MW-603S	MW-603D	MW-604S	MW-604D	MW-605S	MW-605D	MW-606S	MW-606D	MW-607S	MW-607D	MW-610S	MW-610D
		12/02/2019	12/04/2019	12/04/2019	12/05/2019	12/05/2019	12/05/2019	12/05/2019	12/05/2019	12/05/2019	12/06/2019	12/06/2019	12/04/2019	12/04/2019	12/03/2019	12/03/2019
Depth to Water	ft btoc	3.22	2.8	3.03	3.15	2.73	2.6	2.78	4.31	4.31	3.91	4.25	3.44	3.15	5.56	5.55
Dissolved Oxygen	mg/L	0.17	0.23	1.31	0.23	0.5	0.13	0.86	0.15	0.79	0.1	0.97	0.11	0.63	13.57	0.3
Electrical Conductivity	mS/cm	2.247	0.537	2.583	0.439	2.997	1.04	2.857	0.712	2.677	0.658	3.31	0.373	2.126	0.989	1.275
Flow Rate	mL/min	150	240	250	280	250	400	200	425	400	450	100	375	150	240	250
Oxidation Reduction Potential	mV	-87.1	-52.2	-163.8	221.3	-51.2	-117.7	-70.7	-101	-88.4	-63.4	-91.1	-170.5	-165.3	59.3	-43.6
рН	pH units	6.42	7.29	7.43	7.33	5.89	7.05	6.17	7.14	6.11	8.14	6.51	7.95	8.03	7.58	7.2
Temperature	°C	9.49	9.25	11.85	8.37	11.17	8.6	11.26	8.93	12.82	8.09	8.54	5.11	11.06	10.54	11.48
Turbidity	NTU	2.2	0	0	0	0	3.9	7.4	3.7	3.9	1.6	4.4	3.3	0	0	1.6

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NTU = Nephelometric turbidity units

Table 2. Field Parameters, December 2019

OMC Plant 2 Site (OU4) - Waukegan, IL

		MW-612S	MW-612D	MW-613S	MW-613D	MW-614S	MW-614D	MW-615S	MW-615D	MW-619S	MW-619D	MW-620S	MW-620D	MW-621S	MW-621D	MW-623S	MW-623D	MW-624S
		12/06/2019	12/06/2019	12/05/2019	12/05/2019	12/05/2019	12/05/2019	12/04/2019	12/04/2019	12/03/2019	12/03/2019	12/04/2019	12/04/2019	12/06/2019	12/06/2019	12/03/2019	12/03/2019	12/03/2019
Depth to Water	ft btoc	3.56	3.15	3.72	4.35	3.19	3.16	4.72	4.26	4.08	4.15	4.33	4.24	4.38	4.64	2.71	2.87	4.53
Dissolved Oxygen	mg/L	0.13	0.91	4.91	1.33	0.24	1.1	0.39	0.72	0.12	0.24	0.8	0.06	0.31	1.42	0.15	0.28	0.41
Electrical Conductivity	mS/cm	1.1	3.376	1.008	2.506	0.737	4.797	0.592	3.208	0.365	1.879	1.067	2.383	1.571	3.143	0.52	0.581	0.586
Flow Rate	mL/min	450	150	220	300	300	200	240	275	350	300	300	200	350	250	300	200	350
Oxidation Reduction Potential	mV	-115.4	-46.8	232.9	-270.9	225.8	-110.3	82.6	-194.8	-47.5	-235.4	-70.9	-349.3	180.6	204.1	-138.5	-151.7	72.2
рН	pH units	7.06	6.06	7.74	7.3	7.16	8.09	7.19	9.65	8.03	8.85	6.73	7.76	7.35	6.65	7.5	7.65	7.52
Temperature	°C	7.96	10.9	7.58	11.95	9.64	11.45	9.15	10.55	8.62	11.52	9.03	12.05	8.62	11.75	9.23	10.45	9.99
Turbidity	NTU	2.4	0.9	0	0	2.2	4.6	0.7	7.8	0	0	0	34.6	0	2.1	1.4	0	0

Notes:

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mg/L = milligrams per liter

mL/min = millimeters per minute

mS/cm = milliSiemens per centimeter

mV = millivolts

NTU = Nephelometric turbidity units

Table 2. Field Parameters, December 2019

OMC Plant 2 Site (OU4) - Waukegan, IL

		MW-624D	MW-625S	MW-625D	MW-626S	MW-626D	ST-MW-1S	ST-MW-1D	ST-MW-2S	ST-MW-2D	ST-MW-3S	ST-MW-3D	ST-MW-4S	ST-MW-4D	ST-MW-5S	ST-MW-5D	W-5
		12/03/2019	12/05/2019	12/05/2019	12/04/2019	12/04/2019	12/05/2019	12/05/2019	12/04/2019	12/04/2019	12/05/2019	12/05/2019	12/05/2019	12/05/2019	12/04/2019	12/04/2019	12/04/2019
Depth to Water	ft btoc	4.6	2.8	3.4	5.45	5.66	1.2	0.98	1.16	1.1	0.51	0.6	2.1	2.09	3.05	2.97	4.71
Dissolved Oxygen	mg/L	0.32	0.19	0.76	0.73	0.24	0.33	0.79	0.12	0.65	0.24	0.78	0.6	1.72	0.47	1.3	0.79
Electrical Conductivity	mS/cm	1.873	0.538	2.529	1.367	1.964	1.418	2.154	0.61	1.121	0.864	1.533	1.717	0.756	0.829	1.437	2.725
Flow Rate	mL/min	350	450	400	350	300	450	400	400	400	400	425	250	250	220	300	310
Oxidation Reduction Potential	mV	-140	-143.2	-97.6	-91.5	-227.2	-98.3	-75	-123.5	-116.1	-88.2	-81.3	226.1	22.3	82.8	-142	67.3
рН	pH units	7.69	7.75	8.62	7.18	7.75	7.13	6.83	7.22	6.98	7.32	7.01	7.4	7.75	7.12	7.46	7.33
Temperature	°C	11.8	8.83	11.67	10.08	11.98	12.27	13.68	9.81	12.57	11.87	13.79	12.11	13.54	11.6	14.2	10.64
Turbidity	NTU	0	7.2	9.1	5.8	0.1	0	9.8	8.5	3.8	0.7	9.2	4	6.3	6.3	0	0

Notes:

°C = degrees Celsius
ft btoc = feet below top of casing
mg/L = milligrams per liter
mL/min = millimeters per minute
mS/cm = milliSiemens per centimeter
mV = millivolts
NTU = Nephelometric turbidity units

Table 3. Analytical Results, December 2019 *Monitored Natural Attenuation Monitoring - December 2019 OMC Plant 2 Site (OU4) - Waukegan, IL*

Part	DIVIC Flaint 2 Site (004) - Waakegan, IL			MW-003S	MW-003D	MW-011S	MW-011D	MW-501S	MW-501D	MW-513S	MW-513D	MW-516S	MW-516D	MW-528S	MW-528D	MW-600S	MW-600D	MW-601S	MW-601D	MW-602S	MW-602D	MW-603S	MW-603D	MW-604S	MW-604D
March Marc		MCLa	Unit	12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/03/2019	12/02/2019	12/02/2019	12/04/2019	12/04/2019	12/06/2019	12/06/2019	12/02/2019	12/02/2019	12/04/2019	12/04/2019	12/05/2019	12/05/2019	12/05/2019	12/05/2019
Column C			ug/l		0.0811			0.95.11	0.9711																
Marting 1. 19 1 19 1 19 1 19 1 19 1 19 1 19 1																									
Property																									
Service 1																									
Second Column		-																							
September 1968 1969 1969 1969 1969 1969 1969 1969		-																							-
Service 1		-			0.98 U																				
Series 1. 196	Aroclor 1262	-			0.98 U			0.95 U	0.97 U																
Secondary Column	Aroclor 1268	-			0.98 U			0.95 U	0.97 U																
Margin part of the content of the	Volatile Organic Compounds																								
1. 1. 1. 1. 1. 1. 1. 1.	1,1,1-Trichloroethane	200	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U	5 U	5 U	25 U
All Continues	1,1,2,2-Tetrachloroethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U	5 U	5 U	25 U
Second column	1,1,2-Trichloroethane	5	μg/L		5 U		5 U					5 U	5 U		5 U	5 U		5 U		5 U	50 U			5 U	25 U
Second column	,	-	μg/L																					5 U	25 U
Secondary Seco		7																						5 U	15 J
Teacher Teac																								5 U	25 U
Teachers	, ,																							5 U	25 U
Company																								5 U	25 U
Secondar	,																							5 U	25 U
Teacher 1	,																							5 U	25 U 25 U
Company Comp	,																							5 U	25 U
1																								5 U	25 U
Second	,																							5 U	25 U
Amount																								10 U	41 J
American March M																								10 U	50 U
According from the control of the co																								10 U	50 U
Tempor Company Compa		-																						10 U	50 U
Secondary Seco	Benzene	5		5 U	54	5 U	5 U	5 U	1.4 J	5 U	5 U	5 U	550 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U	5 U	5 U	25 U
Installar Section Se	Bromochloromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U	5 U	5 U	25 U
Secretary Secr	Bromodichloromethane ^b	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U	5 U	5 U	25 U
Construction Cons	Bromoform ^b	80	μg/L	5 U			5 U	5 U		5 U		5 U	5 U		5 U	5 U	5 U	5 U		5 U				5 U	25 U
Californic Str. Apr. Str. S																								5 U	25 U
Charlesteres 190																								5 U	25 U
Characteroscorestant Char																								5 U	25 U
Conference Mark SU SU SU SU SU SU SU S																								5 U	25 U
Contenter 1																								5 U	25 U
Description																								5 U	25 U 25 U
Second Composition Proceeding Proceding Proceding Proceding Proceding Proceding Proceding Proceeding Proceding Proced																								5 U	25 U
mail disclosed persone mg/s st st st st st st st																								110	4900
Colhescenic - 100																								5 U	25 U
Decomposition composition Fig. St.	, , ,																							5 U	25 U
Exponential content Fig. Exponential co	,	-																						5 U	25 U
Free	Ethylbenzene	700		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U	5 U	5 U	25 U
Methy Actor Actor Methy Ac	Freon 113	-		5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U	5 U	5 U	25 U
Methyler-bloride per [MT8]	sopropylbenzene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	50 U	5 U	5 U	5 U	25 U
Methylenechones	Methyl Acetate	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	26	5 U	38	5 U	50 U	5 U	72	5 U	25 U
Methylene Chloride		-																						5 U	25 U
Symme 100 10																								5 U	25 U
Tetrachiprocheme S yg/L SU SU SU SU SU SU SU S	•																							5 U	25 U
Total																								5 U	25 U
Tans-12-Dichloredementhen 100 wg/L 5 U																								5 U	25 U
Tans-1,3-lochloropropene -																								5 U	25 U 25 U
Trichlorofethylene	,																							5 U	25 U
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$																								5 U	25 U
Variety Var	,																							5 U	25 U
Xylene, of 10,000 ug/l 5 U																								190	12000
Xyleng 10,000 1																								5 U	25 U
Metals Acres (no. 1) Mg/L 34.6 733 4.21 4.11 18.7 72.8 10U 4.41 5.31 326 1.81 3.11 2.51 5.11 6.51 10U 4.61 3.61 9.21 10U Iron µg/L 100 U 4690 2470 6030 1880 3510 21.71 2180 446 1860 100 U 34.91 3400 24800 7900 12000 3150 96.01 13400 21.00 100 U 44.01 19.0 44.6 1860 100 U 34.91 3400 24800 7900 12000 3150 36.0 96.0 13400 21.00 41.00 19.0 4.0 19.0 4.0 4.0 19.0 4.0 </td <td></td> <td>5 U</td> <td>25 U</td>																								5 U	25 U
Arsenic $\mu g / L$ 34.6 733 4.2 4.1 18.7 72.8 10 U 4.4 J 5.3 J 326 1.8 J 3.1 2.5 J 5.1 6.5 10 U 4.6 J 3.6 J 9.2 J 10 U 10	, , ,	-,	r-o/ -																						
			μg/L	34.6	733	4.2 J	4.1 J	18.7	72.8	10 U	4.4 J	5.3 J	326	1.8 J	3.1 J	2.5 J	5.1 J	6.5 J	10 U	4.6 J	3.6 J	9.2 J	10 U	15.2	10 U
WetChemistry Chloride (Cl) - mg/L 5.71 1000 110 180 5.71 31 37 170 181 1900 7.3 160 441 2401 2.91 210 13 340 5.2 300 Nitrate (as N) - mg/L 0.12 0.05 U	lron			100 U	4690	2470	6030	1880	3510	21.7 J	2180	446	1680	100 U	34.9 J	3400	24800	7900	122000	3150	1300	9640	134000	24000	171000
Chloride (Cl) - mg/L 5.7 J 1000 110 180 5.7 J 31 37 170 18 J 1900 7.3 160 44 J 240 J 2.9 J 210 13 340 5.2 300 Nitrate (as N) - mg/L 0.12 0.05 U 0.05 U 0.07 0.05 U	Manganese		μg/L	22.9	128	447	44.1	219	60.9	34.8	192	524	61.4	15 U	19.6	534	2490	478	4000	197	1660	309	1400	337	990
Nitrate (as N) - mg/L 0.12 0.05 U 0.07 0.05 U 0.05	Wet Chemistry				<u> </u>		<u> </u>				· ·	· ·				<u> </u>		· ·		· ·		· ·	· ·	<u> </u>	
Nitrite (as N) - mg/L 0.05 U 0.018 J 0.005 U 0.018 J 0.005 U 0.018 J 0.005 U 0.018 J 0.005 U 0.005 U 0.005 U 0.05 U 0.05 U 0.05 U 0.05 U 0.05 U 0.03 J 0.004 J 0.03 J 0.05 U 0.05 U 0.05 U 0.018 J 0.004 J 0.03 J 0.05 U 0.05 U 0.018 J 0.005																							300	85	220 J
Sulfate - mg/L 17 670 140 64 9.5 J 12 110 140 62 10 UJ 94 200 120 J 3.5 J 63 J- 10 U 9.9 270 23 1 U Sulfide - mg/L 0.98 J 10 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U 1 U	. ,																							0.05 UJ	0.1 UJ
Sulfide - mg/L 0.98J 1U	, ,																							0.05 UJ	0.063 J
Ethane - µg/L 10 U 10																								0.47 J	20 UJ
Ethene - µg/L 10 U 10 U 10 U 540 10 U 10																								1 U	1 U
Methane - µg/L 10 U 2500 17 U 3200 210 700 150 420 71 29000 10 U 11 U 6300 26000 8500 18000 13000 2600 18000 17000 J Alkalinity, Total (as CaCO3) - mg/L 130 1000 250 520 260 300 300 300 360 1200 150 230 290 700 400 800 290 810 230 960																								870	12 J
Alkalinity, Total (as CaCO3) - mg/L 130 1000 250 520 260 300 300 300 360 1200 150 230 290 700 400 800 290 810 230 960																								470	5300 J
																								19000	7300 J
10141 Organii Candonii - ing/L 1.5 U 12 2.9 8.7 3.0 3.0 5.7 5.1 1.6 35 4 2.4 2.4 2.7 280 4.6 330 6 /5 3.4 930	, , ,																							460	1400
	rotal Organic Carbon	-	rng/L	1.5 U	12	2.9 U	ŏ./	3.6	3.6	3./	3.1 U	1.0 U	36	4	2.4 U	2./	280	4.6	330	р	/5	3.4	930	6.4	720

Table 3. Analytical Results, December 2019 *Monitored Natural Attenuation Monitoring - December 2019 OMC Plant 2 Site (OU4) - Waukegan, IL*

OMC Plant 2 Site (OU4) - Waukegan, IL			MW-605S	MW-605D	MW-606S	MW-606D	MW-607S	MW-607D	MW-610S	MW-610D	MW-612S	MW-612D	MW-613S	MW-613D	MW-614S	MW-614D	MW-615S	MW-615D	MW-619S	MW-619D	MW-620S	MW-620D	MW-621S	MW-621D	MW-623S	MW-623D
Parameter	MCL ^a	Unit	12/05/2019	12/05/2019	12/06/2019	12/06/2019	12/04/2019	12/04/2019	12/03/2019	12/03/2019	12/06/2019	12/06/2019	12/05/2019	12/05/2019	12/05/2019	12/05/2019	12/04/2019	12/04/2019	12/03/2019	12/03/2019	12/04/2019	12/04/2019	12/06/2019	12/06/2019	12/03/2019	12/03/2019
Polychlorinated Biphenyls (PCBs)		,							0.0011	0.07.11				0.711											0.00.11	0.0511
Aroclor 1016 Aroclor 1221	-	μg/L							0.98 U 0.98 U	0.97 U 0.97 U				9.7 U 9.7 U											0.99 U 0.99 U	0.96 U
Aroclor 1221 Aroclor 1232	-	μg/L μg/L							0.98 U	0.97 U				9.7 U											0.99 U	0.96 U
Aroclor 1242	-	μg/L							0.98 U	0.97 U				620 J											0.99 U	0.96 U
Aroclor 1248	-	μg/L							0.98 U	0.97 U				9.7 U											0.99 U	0.96 U
Aroclor 1254	-	μg/L							0.98 U	0.97 U				9.7 U											0.99 U	0.96 U
Aroclor 1260	-	μg/L							0.98 U	0.97 U				9.7 U											0.99 U	0.96 U
Aroclor 1262 Aroclor 1268	-	μg/L							0.98 U 0.98 U	0.97 U 0.97 U				9.7 U 9.7 U											0.99 U 0.99 U	0.96 U
Volatile Organic Compounds		μg/L							0.96 0	0.97 0				9.7 0											0.99 0	0.96 0
1,1,1-Trichloroethane	200	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	-	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane 1,1-Dichloroethene	7	μg/L	0.91 J 3.5 J	50 U 13 J	5 U	5 U	5 U	500 U 570	5 U	25 U 5.8 J	5 U	5 U	5 U	100 U 49 J	5 U	5 U 7.8	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1.2.3-Trichlorobenzene	-	μg/L μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene	70	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	0.2	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane	0.05	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene 1,2-Dichloroethane	600 5	μg/L μg/L	5 U	50 U 50 U	5 U	5 U	5 U	500 U 500 U	5 U	25 U 25 U	5 U	5 U	5 U 5 U	100 U 100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5	μg/L μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	<u> </u>	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,4-Dichlorobenzene	75	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	-	μg/L	10 U	100 U	10 U	120	10 U	1000 U	10 U	50 U	10 U	45	10 U	200 U	10 U	10 U	10 U	12 U	10 U	10 U	10 U	20 U	10 U	9 U	10 U	10 U
2-Hexanone 4-Methyl-2-Pentanone		μg/L μg/L	10 U	100 U	10 U	10 U	10 U	1000 U 1000 U	10 U	50 U	10 U	10 U	10 U	200 U 200 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	-	μg/L	10 UJ	100 U	10 U	40 U	10 UJ	1000 U	10 U	50 UJ	10 U	55 U	10 U	200 U	10 UJ	10 UJ	10 UJ	14 U	10 UJ	10 UJ	10 UJ	11 U	10 U	6.2 U	10 U	10 U
Benzene	5	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromochloromethane	-	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromodichloromethane ^b	80	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform Bromomethane	- 80	μg/L μg/L	5 U	50 U 50 U	5 U	5 U	5 U	500 U 500 U	5 U	25 U 25 U	5 U	5 U	5 U	100 U 100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	-	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	5	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	100	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane ^o Chloroethane	80	μg/L	5 U	50 U	5 U	5 U	5 U	500 U 500 U	5 U	25 U 25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroform ^b	80	μg/L μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	-	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,2-Dichloroethene	70	μg/L	350	10000	23	9.9	5 U	94000	1.3 J	3300	5 U	3.8 J	5 U	26000	5 U	460	2 J	110	5 U	5.5	2.2 J	1.2 J	5 U	3.8 J	0.98 J	5 U
cis-1,3-Dichloropropene	-	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cyclohexane Dichlorodifluoromethane	-	μg/L μg/L	5 U	50 U	5 U	5 U	5 U	500 U 500 U	5 U	25 U 25 U	5 U	5 U	5 U	100 U 100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	μg/L μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Freon 113	-	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	-	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl Acetate	-	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	27	5 U	100 U	5 U	5 U	5 U	43	5 U	5 U	4.6 J	67	5 U	57	5 U	5 U
Methyl tert-butyl ether (MTBE) Methylcyclohexane	-	μg/L μg/L	5 U	50 U 50 U	5 U	5 U	5 U	500 U 500 U	5 U	25 U 25 U	5 U	5 U	5 U	100 U 100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	5	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	1.2 J	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	100	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	5	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Toluene trans-1.2-Dichloroethene	1,000 100	μg/L	5 U 1.5 J	50 U 13 J	5 U	5 U 1.6 J	5 U	500 U 380 J	5 U 1.1 J	25 U 7.2 J	5 U	5 U 2.1 J	5 U	100 U 29 J	5 U	5 U 3.6 J	5 U	5 U 10	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	-	μg/L μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethylene	5	μg/L	22	50 U	5 U	5 U	5 U	32000	19	25 U	5 U	5 U	5 U	29000	5 U	14	5 U	14	5 U	5 U	1.3 J	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	-	μg/L	5 U	50 U	5 U	5 U	5 U	500 U	5 U	25 U	5 U	5 U	5 U	100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride	2	μg/L	170	5200	150 J+	82	5 U	8300	5 U	2600	5 U	11	5 U	8400	5 U	800	1.8 J	180 J+	5 U	48 J+	1.7 J+	1.1 J+	5 U	13 J+	0.56 J	0.82 J
Xylene, o ^c Xylenes, m & p ^c	10,000 10,000	μg/L μg/L	5 U	50 U	5 U	5 U	5 U	500 U 500 U	5 U	25 U 25 U	5 U	5 U	5 U	100 U 100 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Metals	10,000	μg/ L	30	30 0	3.0	3.0	30	300 0	30	23 0	3.0	30	3.0	100 0	3.0	3.0	30	3.0	30	3.0	30	3.0	30	3.0	30	30
Arsenic		μg/L	3.1 J	10 U	2.1 J	14.8	1.7 J	2.7 J	10 U	10 U	10 U	10 U	10 U	4.6 J	10 U	15.3	4.5 J	16.7	1.6 J	2.4 J	7.1 J	4.2 J	2.7 J	3.9 J	53.1	1.9 J
Iron		μg/L	4920	162000	45.6 J	63800	1540	1220	100 U	5650	7340	163000	100 U	3470	2780	1000	14300	967	47.1 J	775	23000	852	789	43900	3480	3010
Manganese		μg/L	624	2850	65.1	7190	11.9 J	6560	15 U	72.8	1670	2920	15 U	755	202	146	729	184	171	18.7	1140	857	129	611	426	38.4
Wet Chemistry Chloride (CI)		mg/L	35 J	380 J	44	200 J	14	310	75	150	100	440	15	300	22	330 J	5	880 J	5.2 J	220	12	92 J	130 J-	500 J-	10 J	37
Nitrate (as N)	-	mg/L	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.13	0.05 U	0.05 U	0.05 U	0.043 J	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U	0.073	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.074
		O/ -		0.055 J	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.017 J	0.05 U	0.049 J	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U	0.05 U	0.0044 J	0.011 J	0.05 U	0.033 J	0.0067 J	0.05 U
Nitrite (as N)	-	mg/L	0.05 UJ	0.0553	0.05																			0.000	0.0007 3	
Nitrite (as N) Sulfate		mg/L mg/L	29	240 J	220	1.6 J	70	260	200	170	25	0.82 J	580	23	29	430 J	22	3.4	84	180	140	180 J	650	10 U	26	46
Nitrite (as N) Sulfate Sulfide	- - -	mg/L mg/L	29 1 U	240 J 1 U	220 1 U	1.6 J 1 U	1 U	0.82 J	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1	1 U	10 U 1 U	26 1 U	1 U
Nitrite (as N) Sulfate Sulfide Ethane	- - - -	mg/L mg/L μg/L	29 1 U 130	240 J 1 U 46	220 1 U 20	1.6 J 1 U 48 J	1 U 6.7 J	0.82 J 1500	1 U 10 U	1 U 26	1 U 300	1 U 310 J	1 U 10 U	1 U 290	1 U 65	1 U 3000 J	1 U 56	1 U 43 J	1 U 10 U	1 U 10 U	1 U 22	1.1 30 J	1 U 11	10 U 1 U 140 J	26 1 U 10 U	1 U 10 U
Nitrite (as N) Sulfate Sulfide Ethane Ethene	- - -	mg/L mg/L μg/L μg/L	29 1 U 130 120	240 J 1 U 46 11000	220 1 U 20 20	1.6 J 1 U 48 J 1200 J	1 U 6.7 J 9.6 J	0.82 J 1500 7400	1 U 10 U 10 U	1 U 26 110	1 U 300 10 U	1 U 310 J 5000 J	1 U 10 U 10 U	1 U 290 3700	1 U 65 10 U	1 U 3000 J 700 J	1 U 56 2.6 J	1 U 43 J 2000 J	1 U 10 U 10 U	1 U 10 U 34	1 U 22 10 U	1.1 30 J 210 J	1 U 11 55 J	10 U 1 U 140 J 25000 J	26 1 U 10 U 10 U	1 U 10 U 10 U
Nitrite (as N) Sulfate Sulfide Ethane		mg/L mg/L μg/L	29 1 U 130	240 J 1 U 46	220 1 U 20	1.6 J 1 U 48 J	1 U 6.7 J	0.82 J 1500	1 U 10 U	1 U 26	1 U 300	1 U 310 J	1 U 10 U	1 U 290	1 U 65	1 U 3000 J	1 U 56	1 U 43 J	1 U 10 U	1 U 10 U	1 U 22	1.1 30 J	1 U 11	10 U 1 U 140 J	26 1 U 10 U	1 U 10 U

Table 3. Analytical Results, December 2019 *Monitored Natural Attenuation Monitoring - December 2019 OMC Plant 2 Site (OU4) - Waukegan, IL*

Parameter Polychlorinated Biphenyls (PCBs)	MCL ^a	Unit	MW-624S 12/03/2019	MW-624D 12/03/2019	MW-625S 12/05/2019	MW-625D 12/05/2019	MW-626S 12/04/2019			ST-MW-1D 12/05/2019									W-5 12/04/2019
Aroclor 1016	-	μg/L	0.95 U	0.97 U					0.95 U	4.8 U	0.97 U	0.98 U	0.94 U	0.96 U	0.93 U	1 U	9.8 U	0.97 U	0.95 U
Aroclor 1221	-	μg/L	0.95 U	0.97 U					0.95 U	4.8 U	0.97 U	0.98 U	0.94 U	0.96 U	0.93 U	1 U	9.8 U	0.97 U	0.95 U
Aroclor 1232	-	μg/L	0.95 U	0.97 U					0.95 U	4.8 U	0.97 U	0.98 U	0.94 U	0.96 U	0.93 U	1 U	9.8 U	0.97 U	0.95 U
Aroclor 1242	-	μg/L	0.95 U	0.97 U					99 J+	190	0.97 U	0.98 U	0.21 J	0.22 J	0.55 J	0.5 J	230	0.22 J	0.95 U
Aroclor 1248 Aroclor 1254	-	μg/L μg/L	0.95 U 0.95 U	0.97 U 0.97 U					0.95 U 0.95 U	4.8 U 4.8 U	0.97 U 0.97 U	0.98 U 0.98 U	0.94 U 0.94 U	0.96 U 0.96 U	0.93 U 0.93 U	1 U 1 U	9.8 U 9.8 U	0.97 U 0.97 U	0.95 U 0.95 U
Aroclor 1260	-	μg/L	0.95 U	0.97 U					0.95 U	4.8 U	0.97 U	0.98 U	0.94 U	0.96 U	0.93 U	1 U	9.8 U	0.97 U	0.95 U
Aroclor 1262	-	μg/L	0.95 U	0.97 U					0.95 U	4.8 U	0.97 U	0.98 U	0.94 U	0.96 U	0.93 U	1 U	9.8 U	0.97 U	0.95 U
Aroclor 1268	-	μg/L	0.95 U	0.97 U					0.95 U	4.8 U	0.97 U	0.98 U	0.94 U	0.96 U	0.93 U	1 U	9.8 U	0.97 U	0.95 U
Volatile Organic Compounds	200	/1	F.11	F.11	F.11	F.11	F.11	F.11	5.11	F.11	F.11	F.11	F.11	511	F.11	F.11	F.11	5.11	F.11
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	200	μg/L μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	-	μg/L	5 U	3.1 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	7	μg/L	5 U	5 U	5 U	5 U	9.2	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,3-Trichlorobenzene	70	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trichlorobenzene 1,2-Dibromo-3-chloropropane	70 0.2	μg/L μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromoethane	0.05	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichlorobenzene	600	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	5 -	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene 1,4-Dichlorobenzene	- 75	μg/L μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone	-	μg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U				
2-Hexanone	-	μg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U				
4-Methyl-2-Pentanone	-	μg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U				
Acetone	-	μg/L	10 U	10 U	10 UJ	10 U 5 U	10 U 5 U	10 U	10 U	10 U 5 U	10 U 5 U	10 U 5 U	10 U 5 U	10 U 5 U	10 U 5 U	10 U	10 U	10 UJ	10 UJ 5 U
Benzene Bromochloromethane	5 -	μg/L μg/L	5 U	13 5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	3 J 5 U	18 5 U	5 U
Bromodichloromethane ^b	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform ^b	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride Chlorobenzene	5 100	μg/L μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorodibromomethane ^b	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroformb	80	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane	70	μg/L	5 U	5 U 1.1 J	5 U 3 J	5 U 2 J	5 U 400	5 U	5 U 2 J	5 U 140	5 U	5 U	5 U	5 U	5 U	5 U	5 U 1.2 J	5 U	5 U
cis-1,2-Dichloroethene cis-1,3-Dichloropropene	-	μg/L μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Cyclohexane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dichlorodifluoromethane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	700	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.51 J	5 U	5 U
Freon 113 Isopropylbenzene	-	μg/L μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U 1.9 J	5 U	5 U
Methyl Acetate		μg/L μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methyl tert-butyl ether (MTBE)	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene Chloride	5	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	100	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene Toluene	5 1,000	μg/L μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,2-Dichloroethene	100	μg/L	5 U	5 U	5 U	5 U	2.5 J	5 U	5 U	2.8 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	-	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethylene	5	μg/L	5 U	5 U	5 U	5 U	180	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichlorofluoromethane	2	μg/L	5 U	5 U	5 U	5 U 1100	5 U	5 U 4.9 J	5 U	5 U	5 U	5 U 1.1 J	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl Chloride Xylene, o ^c	10,000	μg/L μg/L	5 U	7.2 5 U	15 5 U	5 U	140 5 U	5 U	5 U	0.61 J+ 5 U	5 U	5 U	5 U	5 U	5 U	5 U	0.9 J	1.3 J+ 5 U	5 U
Xylenes, m & p ^c	10,000	μg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Metals																			
Arsenic		μg/L	4.1 J	1120	1.9 J	7.1 J	7.7 J	2.3 J	10 U	5.4 J	3.8 J	10 U	1.8 J	2 J	2.9 J	2.4 J	672	538	2.1 J
Iron		μg/L	100 U	2990	1040	1680	6630	3020	3580	6920	6590	13700	1160	3010	2290	100 U	6260	1280	8250
Manganese Wet Chemistry		μg/L	286	90	365	48	1110	46.7	80.3	70.4	1020	270	434	399	245	5 J	345	47.5	93.2
Chloride (Cl)	-	mg/L	3.8 J	310	24	180	9.8	130	230	530	37	130 J-	22	330	270	77	28	220	770
Nitrate (as N)	-	mg/L	0.05 U	0.05 U	0.05 UJ	0.14 J	0.05 U	0.05 U	0.029 J	0.05 UJ	0.05 U	0.05 UJ	0.05 UJ	0.024 J	0.05 UJ	1.1 J	0.05 U	0.1	0.05 U
Nitrite (as N)	-	mg/L	0.05 U	0.05 U	0.05 UJ	0.05 UJ	0.0039 J	0.05 U	0.05 UJ	0.0068 J	0.05 U	0.018 J	0.05 UJ	0.05 UJ	0.05 UJ	0.05 UJ	0.05 U	0.0088 J	0.05 U
Sulfate	-	mg/L	110	420	170	400	470	520	140	160	100 J-	110	260	98	1 U	290	39	110	28
	-	mg/L	2.3	1 U	1 U 35	1 U 31	1 U 24	1 U 4.9 J	1 U 10 U	1 U 10 U	1.6 10 U	1 U 10 U	1 U 10 U	1 U 2.9 J	1 U 10 U				
Sulfide Ethane		11071	1011	12					100	100	100	10 0	100	10 0	100	10 0	10 0	4.J J	100
Ethane	-	μg/L μg/L	10 U	18 10 U					10 U		10 U	10 U	10 U	10 U	10 U				
	- - -	μg/L μg/L μg/L	10 U 10 U 57	18 10 U 540	5.3 J 9400	260 690	14 12000	10 U 3500	10 U 61	10 U 300	10 U 15 U	10 U 910	10 U 50	10 U 58	10 U 190	10 U 53	10 U 10000	10 U 300	10 U 74 J
Ethane Ethene		μg/L	10 U	10 U	5.3 J	260	14	10 U		10 U									

Table 3. Analytical Results, December 2019

Monitored Natural Attenuation Monitoring - December 2019 OMC Plant 2 Site (OU4) - Waukegan, IL

Notes:

J indicates the result is an estimated quantity.

U indicates he analytes was not detected above the reported quantitation limit (QL).

UJ indicates the analyte was not detected above the QL and the QL is approximate.

μg/L = micrograms per liter

- = no criteria

Greyed cells indicate detection over the MCL.

^a Maximum Contaminant Level (MCL), EPA National Primary Drinking Water Regulations, EPA 816-F-09-004, May 2009.

^b MCL is for Total Trihalomethanes, includes the individual trihalomethanes (bromodichloromethane, chlorodibromomethane, chloroform, and tribromomethane).

^c MCL is for Total Xylenes, includes m,p-Xylene and o-Xylene; the MCL for total Xylenes was considered an evaluation surrogate.

Figures

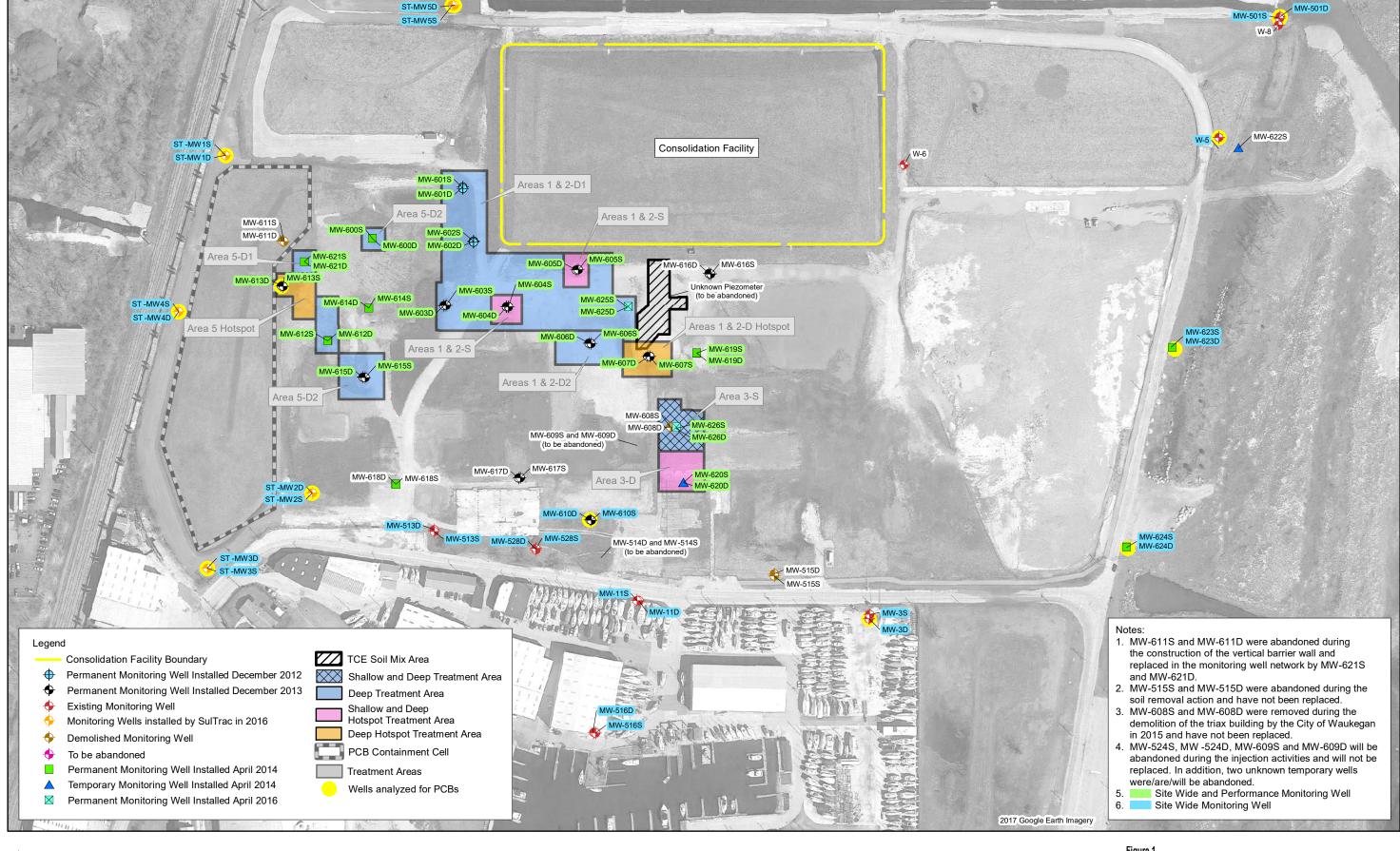
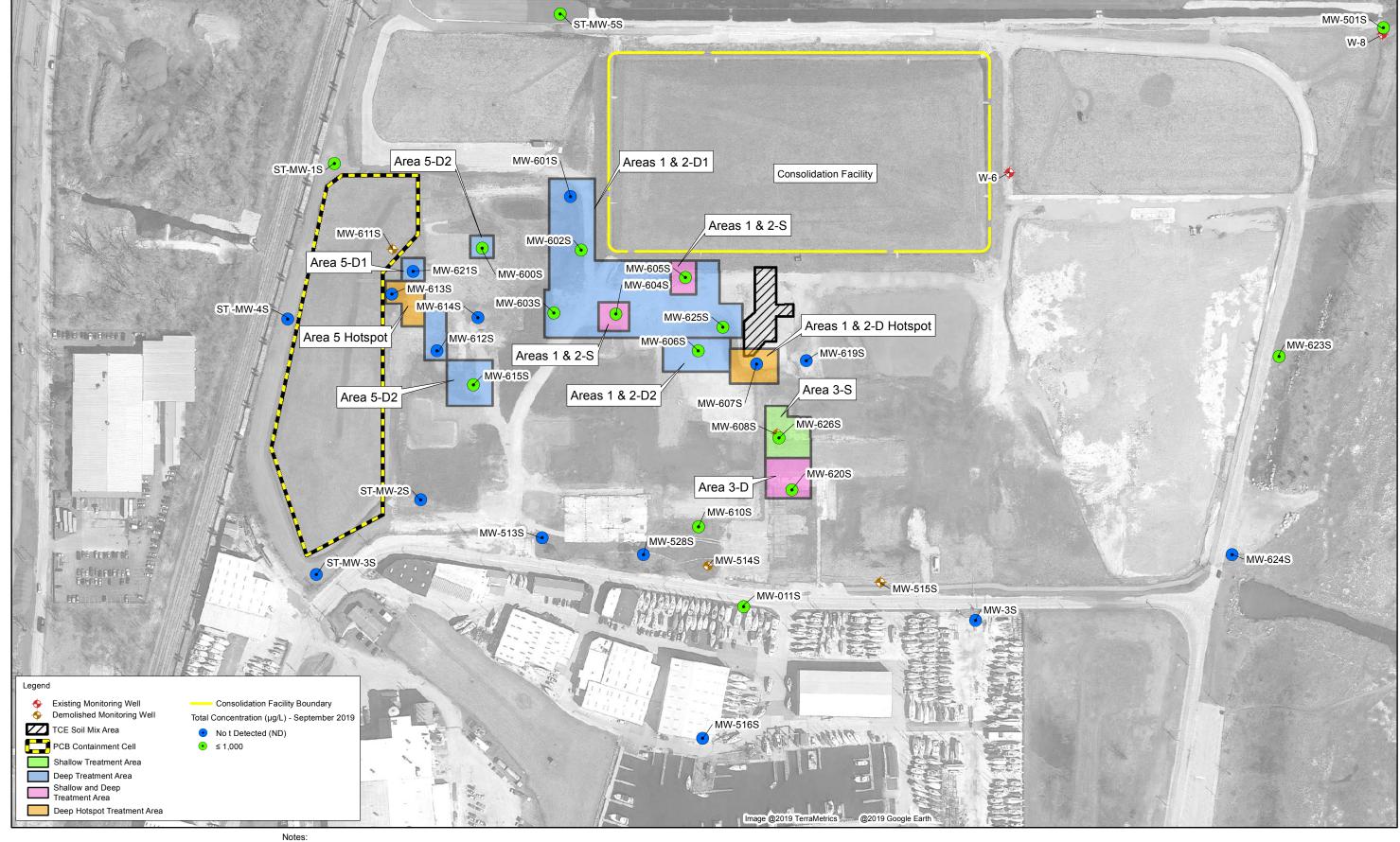
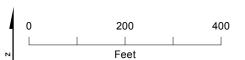


Figure 1
200 400
Monitoring Well and Groundwater Sampling Locations
OMC Plant 2
Feet
Waukegan, IL



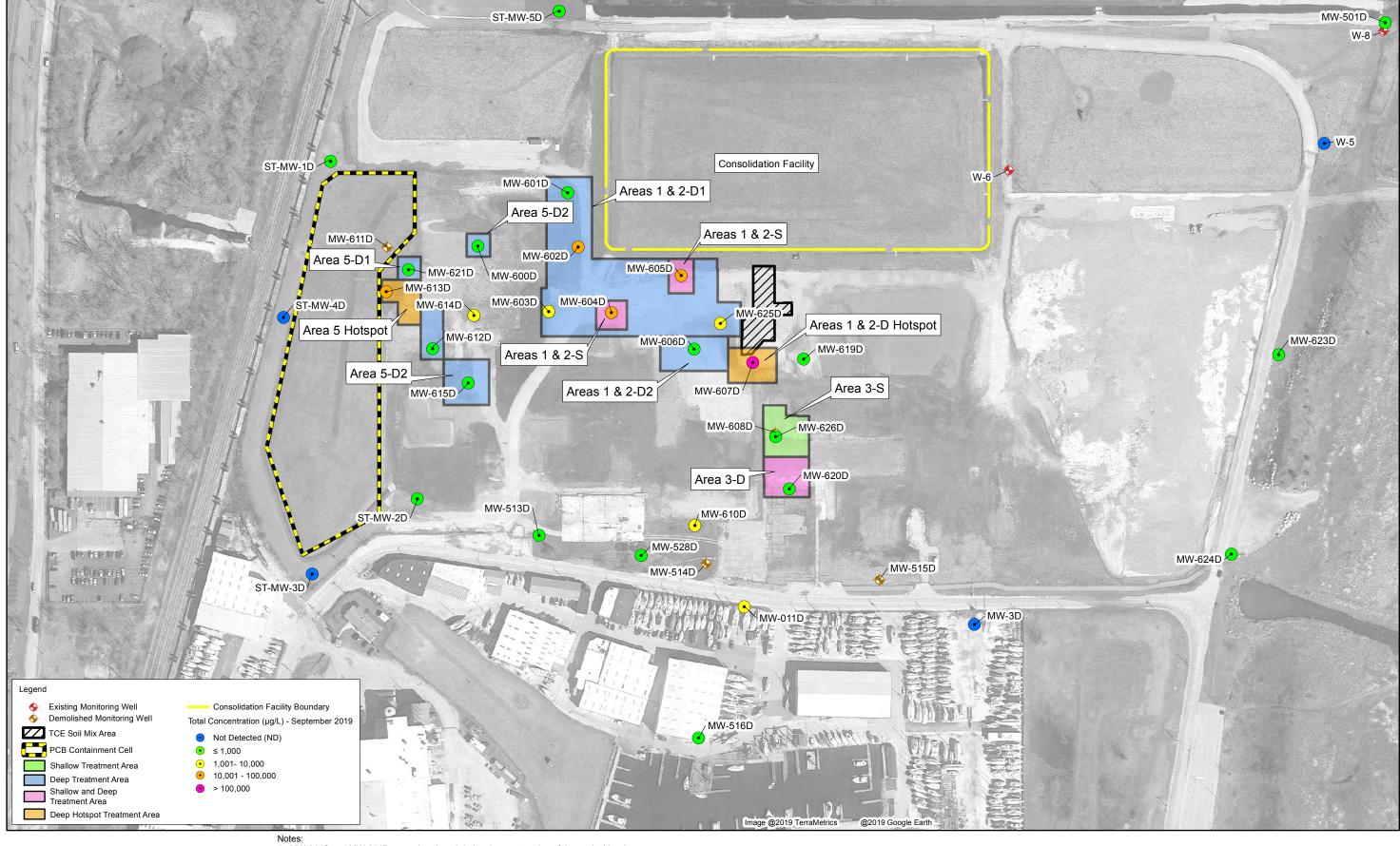


- Notes:

 1. MW-611S and MW-611D were abandoned during the construction of the vertical barrier wall and replaced by MW-621S and MW-621D.

 2. MW-608S was destroyed during the demolition of the triax building in 2015.
- 3. Total concentration is the sum of the detected concentrations for trichloroethene, cis-1,2-dichloroethene, and vinyl chloride.

Figure 2A December 2019 Sampling Results - Shallow Wells OMC Plant 2 Waukegan, IL



0 200 400 N Feet

- MW-611S and MW-611D were abandoned during the construction of the vertical barrier wall and replaced by MW-621S and MW-621D.
- MW-608S and MW-608D were destroyed during the demolition of the triax building in 2015.
- Total concentration is the sum of the detected concentrations for trichloroethene, cis-1,2-dichloroethene, and vinyl chloride.

Figure 2B
December 2019 Sampling Results - Deep Wells
OMC Plant 2
Waukegan, IL

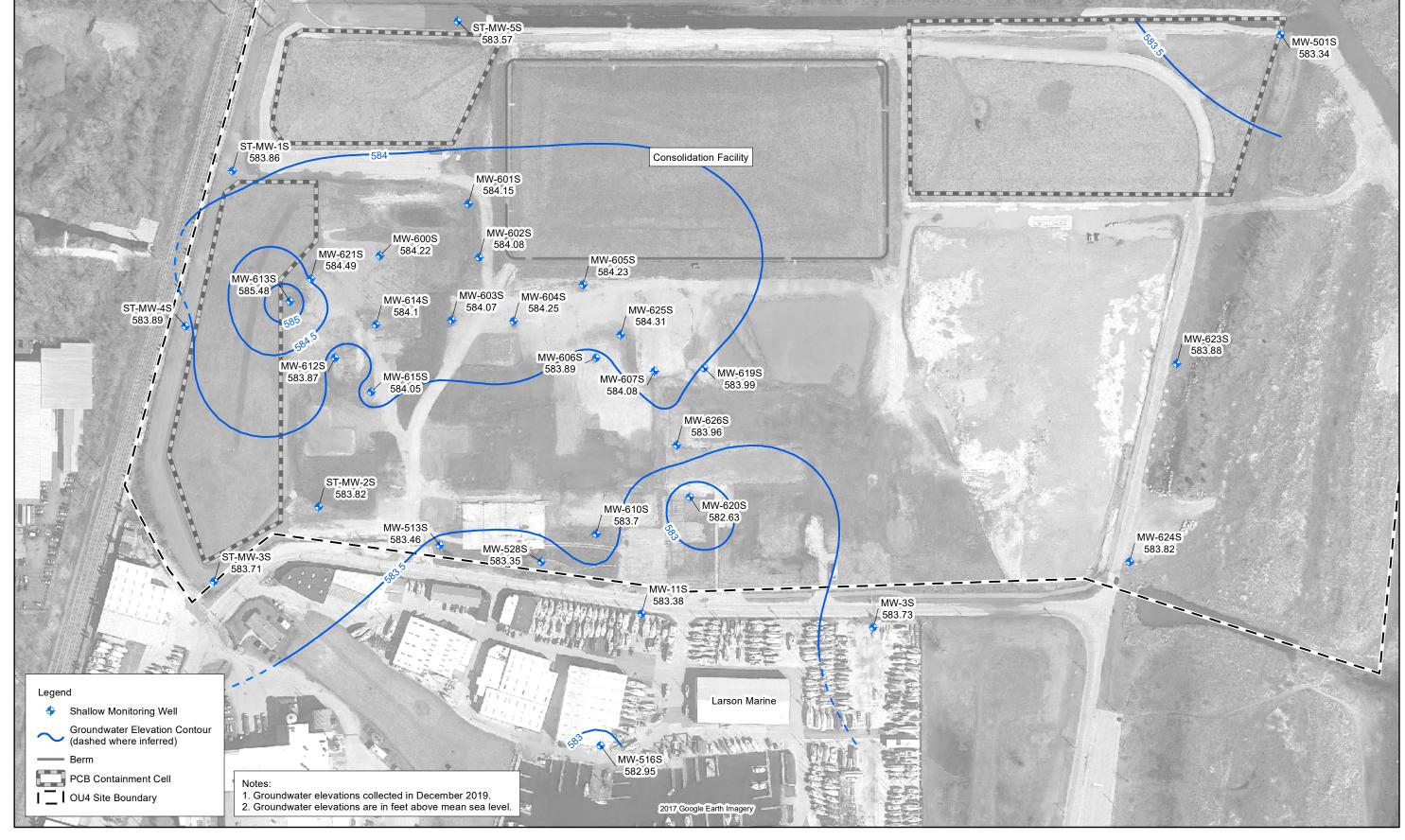


Figure 3A

December 2019 Shallow Potentiometric Surface Map

OMC Plant 2

Waukegan, IL

200

Feet

400

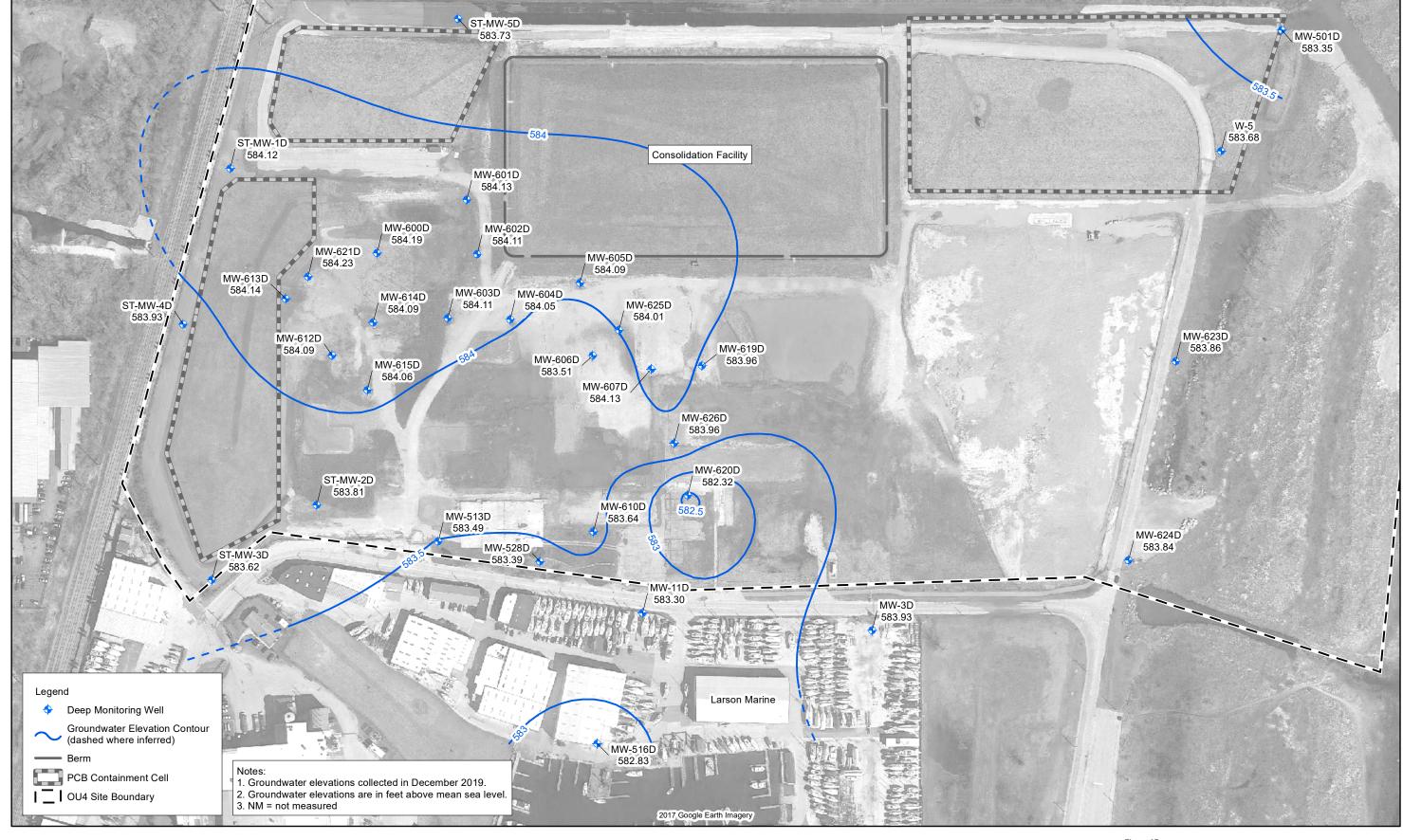


Figure 3B

200 400

December 2019 Deep Potentiometric Surface Map

OMC Plant 2

Feet

Waukegan, IL

Attachment 1 Groundwater Sampling Forms

Monitoring Well Field Data Sheet - OMC Groundwater Site Well Number: MW 35 Field Crew: L. SCHOPECH Purpose of Sampling: **OMC Quarterly Sampling** Site: OMC Field Conditions: CLOUDY WELL CONDITION Well Pad Not Acceptable Explain: **Protective Casing** Not Acceptable Explain: Well Casing Explain: Not Acceptable Not Acceptable Explain: NO LOCK Locking Cap Well Label (outside) Not Acceptable Explain Well Label (inside) Not Acceptable Explain: Not Acceptable J-Plug Acceptable Explain: NO **PURGE METHOD** Time: 8:17 Date: 12/3/19 Method: low-flow Total Well Depth (ft) 14.80 3.89 Depth to Water (ft): Water Column (ft): Comments: 10, **OBSERVATIONS** Odor: None High , H2S , Fuel Like , Other: Comments FIELD PARAMETERS Specific Volume Rate DО ORP Temp Turbidity Depth to water Time рΗ (s.u.) Conductance (mL/min) (mg/L) (mV) (NTU) (°C) (mS/cmc) 811 +/- 10% +/- 10 mV +/- 3% <10 NTU +/- 3% 09, 0.27 8:20 740 3 3.98 0,274 1,49 017.75 200 30 03 220 26 04 3.1 N3 220 33 9:55 SAMPLED SAMPLING Date: 12/3/19 Time: 8:55 Sample ID: DMC - MW - 35 Method of Sample Collection: grab

Analytical Parameters: VOCS, MNA - Metals

Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A

Q.C. Parameters: N/A

Trash picked up?

SIGNED/SAMPLER:

Laci Scharch

Monitoring Well

1 (gal) (mL/min) pH (s.u.) (mg/L) (mv) (mS/cmc) (°C) (NTU) (feet) (mS/cmc) (°C) (mS/cmc) (m				Fiel		ONG Crown de unde	a Cita			····
Well Pad	Mall Mount on	•	26			UMC Groundwate		line:	0140 014	artarlı Camplina
WELL CONDITION		• • • • •	20			al. i	Pulpose of Samp	ung	ONC QU	arterry Sampling
Not Acceptable Not Acceptable Explain No	Site:	OMC								
Note Casing	Well Pad		Acceptable	and the same of th		disalis.				
Locking Cap	Protective Cas	ing	Acceptable	Not Acceptable	Explain:					
Note Comments Co	Well Casing		Acceptable	Not Acceptable	Explain:					
Note Label (Inside) Acceptable Note Acceptable Explain: 10 19 149	Locking Cap	(Acceptable	Not Acceptable	Explain:					
Acceptable Not Acceptable Explain: 10 p 10	Well Label (out	tside)	Acceptable	Not Acceptable	Explain:					
Date:	Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
Date:	J-Plug		Acceptable (Not Acceptable	Explain:	no young				
Total Well Depth (o) = 30. US Depth to Water (fr): = 3. 6 Water Column (ft): = 77.07 (cn) OBSERVATIONS Odd: North Low High Hs Fuel Like Other: Comments: C(2.xV , 5 ght Hy Yell dw) FIELD PARAMETERS Time (gal) (nd, min) PH (s.u.) (nog.) (nog.) (non-conductance (gal) (nd, min) (nog.) (no	- 1016	7./.0	=: 000	2.0				- **		
Depth to Water (ft): = 3, 6 4, 4 1 volume 27.07 (km) 27.07	1012	3/19	CO	20	Method:	iow-flow				
Water Column (R)	,		- 30.(08						
OBSERVATIONS OBSE	•		2/0	AC -	4.4					
OBSERVATIONS Odor: (North Low High High High Field Ike Other: Clearly , Slightly Yell dw FIELD PARAMETERS Time (gai) (mL/min) pH (s.u.) DO (mg/mg/mg/my) (mm) (mm) (mm) (mm) (mm) (mm) (mm) ((11).	27	7						
Oddor: Non) Low High H.S. Fuel Like Other:	Comments:		97.0	T (con)	, volumo					
Comments Clear Slightly Yell dw FIELD PARAMETERS Conductance (mg/L) (m					OBSERVATIO	NS				
FIELD PARAMETERS Fine Volume (gal) PH (s.u.) DO (mgA.) (my) (conductance (mx) (my) (conductance (mx) (my) (conductance (mx) (mx) (my) (conductance (mx) (mx) (mx) (conductance (mx) (mx) (conductance (mx) (mx) (conductance (mx) (mx) (conductance (Odor:	None , L	ow , High	, H₂S , Fuel						
FIELD PARAMETERS Time Volume Rate (gal) PH (s.u.) OO (mg/L) (mLmin) PH (s.u.) OO (mg/L) (mV) (mS/CmC) (nS/CmC) (nS/Cm	Comments:	Clark.	بالحامياء	المحالجين						
Time Volume (gal) Rate (mUmin) PH (s.u.) DO (mg) (mg) (my) (my) (my) (my) (my) (my) (norm) PH (s.u.) P	•	Cleny	, stigner	1 yeurw						
Time (gain) (m/min) pH (s.u.) (mg/L) (my/mol/mol/mol/mol/mol/mol/mol/mol/mol/mol				FI	ELD PARAME	TERS	In			
0825 225 759 3.08 60 7 5.406 10.66 44 3.65 0830 225 7.52 2.85 -144.1 5.444 10.23 1.0 3.65 0835 225 748 264 -1616 5.460 16.17 0.36 0840 2.25 7.41 2.60 -1594 5.35 10.26 0.36 0845 225 7.27 2.46 -154.6 5.641 10.32 0.36 0850 225 7.27 2.46 -152.2 5.70 10.33 0.36 0850 225 7.28 2.45 -152.2 5.70 10.30 0.36	Time			pH (s.u.)			Conductance	'		Depth to water (feet)
0830		-			+/- 10%	4 .		+/- 3%	<10 NTU	
0835	0825		+	1 - 1	3.08	1	5.406	10.66	144	3.65
0840 225 7.41 2.60 -159.4 5.535 10.26 0 3.65 0845 225 7.33 2.54 -154.6 5.641 10.32 0 3.65 0850 225 7.29 2.46 -152.2 5.701 10.33 0 3.65 0905 225 7.28 2.45 -152.2 5.701 10.20 0 3.65 0905 V 225 7.28 2.41 -149.1 5.737 10.30 0 3.65 0905 V 225 7.25 2.41 -149.1 5.737 10.30 0 3.65 0905 V 225 7.25 2.43 -149.2 \$.730 10.52 0 3.65 Sampled © 0915 Method of Sample Collection: grab Analytical Parameters: VX, dissolved Wtals, MNA, PCB 0.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A	0830		225	7.52	2.85	-144.1	5-444	10.23	10	365
0845	0835		225	748	264	-1616	5460	1017	0	3.65
0845	0840		225	7.41	2 60	-1594	5 535	10.26	0	365
0850			225	7.33	2.54	-154.6	5-641	10.32	0	365
3900 225 7.28 2.45 -152.2 5.720 10.20 0 3.65 3405 225 7.25 2.41 -149.1 5.737 10.30 0 3.65 0910 N4 225 7.25 2.43 -149.2 \$.730 10.32 0 3.65 Sampled @ 0915									Λ	3.65
3405 V 225 7-25 2-41 -149.1 5.737 10.30 0 3.69 O910 N4 225 7-25 2.43 -149.2 \$ 7-30 10.32 0 3.69 Sampled @ 0915 Date: 12/3/19 Sample ID: OM C-MW-3D Analytical Parameters: VX, dissolved Whals, MNA, PCB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A						-157.2	57200	10.20		3.65
SAMPLING Date: 12/3/19 Sample ID: OM C-MW-3D Analytical Parameters: VOC, dissolved Wtals, MNA, PCB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A.		1	T .			-149.1			 	3.65
SAMPLING Date: 12/3/19 Sample ID: OM C-MW-3D Analytical Parameters: VOC, dissolved Wtals, MNA, PCB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A		AL H				 				
SAMPLING Date: 12/3/19 Time: 0 9 15 Sample ID: OM C-MW-3D Method of Sample Collection: grab Analytical Parameters: VOC, dissolved Wtals, MNA, PCB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A	0910	 		 			3.120	10.52	-	2162
Date: 12/3/19 Sample ID: 0MC-MW-3D Method of Sample Collection: grab Analytical Parameters: VOC, dissolved Wtals, MNA, PCB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A		> a	impled	01/	<u> </u>	_	[(4)
Date: 12/3/19 Sample ID: 0MC-MW-3D Method of Sample Collection: grab Analytical Parameters: VOC, dissolved Wtals, MNA, PCB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A										<u> </u>
Date: 12/3/19 Sample ID: 0MC-MW-3D Method of Sample Collection: grab Analytical Parameters: VOC, dissolved Wtals, MNA, PCB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A										
Sample ID: OM C-MW-3D Method of Sample Collection: grab Analytical Parameters: VOC, dissolved Wtals, MNA, PcB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A					SAMPLING		<u>.</u>			
Sample ID: OM C-MW-3D Method of Sample Collection: grab Analytical Parameters: VOC, dissolved Wtals, MNA, PcB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A	Date: (2/3)	/19			Time: 091	5				
Analytical Parameters: VC, dissolved wtals, MNA, PCB Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A			W-3D		Method of San	nple Collection:	grab			
Q.C. Sample Type: NA MS/MSD Duplicate Duplicate Sample ID: NA				alved wit	als M	NA POB				
	Q.C. Sample T	ype: [/] //	← MS/MSD	Duplicate	Duplicate Sam	ple ID: N/A				
						7 '				
Trash picked up? Well locked?				Well locked?	V .					
SIGNED/SAMPLER: VALAA O			l		1					

									Po
				Monito	ring Well		<u></u>		
			Field	Data Sheet -	OMC Groundwate	r Site			
Well Number:	MM-11	15	Field Crew:	5 CHARCH		Purpose of Sample	ing:	OMC Quart	erly Sampling
Site:	ОМС		Field Conditions:	CLUUD	Y 240F				
		\mathcal{A}	V	VELL CONDITI	ON /				<u>.</u>
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	ing	Adceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:	10 LOCK	-			
Well Label (out	tside)	Acceptable	Not Acceptable	Explain:	NA				
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:	Jeeds no	W J- 1	olug-		
				PURGE METH					
Date:		Time:		Method:	low-flow				
Total Well Dep	oth (ft)	= 13.8	-						
Depth to Water	r (ft):	= 4,02	•						
Water Column	(ft):	= 9,89	3	1.0					
Comments:		710	,	1 volume					
				OBSERVATIO	NS				
Odor:	None L	ow High	, H₂S , Fuel I	Like Other:					
Comments: (CLOUDY	RROWN	WATER	FOR FIR	ST TWO R	EAD NOS,	CLEAR	EO C	10:10
		0.4							THE SPACE
			FI	ELD PARAMET	ERS	In		1 1	
Time	Volume	Rate	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance	Temp (°C)		Depth to water (feet)
9:56	(gal)	(mL/min)	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	(mS/cmc) +/- 3%	+/- 3%	<10 NTU	
10:00		400	7.01	0,37	163,3	1,030	8.39	83.5	4.02
0.05		320	7.03	0.33	15701	1.049	8.09	62.6	4,02
10:10		320	7,05	0.34	150.6	1,057	7.98	60.2	4,02
10:15		320	7.06	0.29	143,6	1.061	7,86	572 1	4.02
• • • • • • • • • • • • • • • • • • • 	 				135,2	1.066	1 1 1 1 1	37.7	
10:20	+	240	7.07	0,25	137,6	1.000	+,77	13 T. T	4,02

			110	ELU PARAME I	LITO				
Time 9.56	Volume (gal)	Rate (mL/min)	i	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
1 7 4	<u> </u>		+/- 0.1 s.u.	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
10:00	1	400	7.01	0,37	163,3	1,030	8.39	83.5	4.02
10:05		320	7.03	0.33	156.1	1.049	8.09	62.6	4,02
10:10		320	7.05	0.34	150.6	1.057	7.38	60.2	4,02
10:15		320	7.06	0.29	143.6	1.001	7,86	50.0	4.02
10:20		240	7.07	0,25	135,2	1.066	7.99	37.7	4.02
10:25		240	7,09	0.24	125,2	11072	7.95	31.9	4.02
10:30		240	7.10	0,22	113.9	1,076	7,93	20,5	4,02
i0:35		240	7.11	0,21	97.9	1078	8.04	1316	4,02
10:40		240	7.11	0,23	91,6	1.074	7,95	10.8	4.02
10 45		240	7.12	0,26	79.5	1.0000	8.07	10.2	4.02
10:50		240	7,12	0,28	70.1	1.057	7,97	6.2	4.02
10:55		240	7.12	0:30	60.4	1.047	8,00	3.6	4.02

Date: 121312019 Time: 11:35 Sample ID: OMC - MW-11 5 Method of Sample Collection:

Analytical Parameters: VOCs , MCACL, MNA

Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A Q.C. Sample Type: N/A

SAMPLING

Q.C. Parameters: N/A

				Monito	ring Well				
	- 5		Fiel	ld Data Sheet -	OMC Groundwate	er Site			
Well Number:	MW-	HS	Field Crew:	SCHAR	14	Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	OMC	=	Field Conditions:		y CLOUDY	134°F			
Mall Dark				WELL CONDIT	ION				
Well Pad	·	Acceptable	Not Acceptable	Explain:					
Protective Cas	ung	Acceptable	Not Acceptable	Explain:		١			
Well Casing		Acceptable	Not Acceptable	Explain:	26	P61			
Locking Cap	teide)	Acceptable	Not Acceptable	Explain	SEE	, (•			
Well Label (out	,	Acceptable	Not Acceptable	Explain:	/				
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	00				
Date:		Time:		No. de de). Ø.				
Total Well Dep	th (ft)	= 12.8	5	Wethod:	, 21				
Depth to Water	r (ft):	= 1	SEEFF	NOW,					
Nater Column	(ft):	=							
Comments:				1 volume					
				OBSERVATIO	NS	···			
Odor:	None , L	ow , High	, H₂S , Fuel	Like , Other:					
Comments:									
	<u> </u>	la .	FI	ELD PARAMET		Specific	I		1
lime .	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	Turbidity (NTU)	Depth to water (feet)
11.55			+/- 0.1 s.u.	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
1:00		240	7,12	0.31	52.3	1.045	8,06	2.5	4.02
1:05		240	7,12	0.33	45.0	1.038	BUB	2.0	4,02
1:10	1 /	240	7.12	0,34	38.8	1.037	8 24	1,8	4,02
1 110		240	7,13	0,34	32,8	1.032	8,03	1.3	4,02
1 1 1		240	7.13	0,34	27.5	1.030	8,16		4,02
		<u> </u>		0,36	22.5	/ -			402
11:20	1	2.10	1 4 10	111 21	L 4 / 1 S	1,029	8.19		
1:20	1	240	7.12	0120		1	10 -		
1:20	N8	240	7,13	0.37	17.8	1.023	8,03	0.9	9,02
1:20	1	1	7,13	0.37		1.023	8,03	0.8	4.02
1:20	1	240	7,13	0.37		1.023	8,03	0.43	9.02
1:20 1:25 1:30	1	240	7,13	0.37		1.023	8,03	0.5	9,02
1:15 1:20 1:25 1:30 1:35	1	240	7,13	0.37		1.023	8,03	0.8	4.02

SAMPLING Time: 10:35

Date: 12/3/2019 Sample ID: OMC - MW - 11S

Method of Sample Collection:

Analytical Parameters: VOCs , MNA , METALS Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A

Q.C. Parameters:

Trash picked up?

SIGNED/SAMPLER:

Raa Jaharah

Sample ID: OMC-MWID Method of Sample Collection:

Analytical Parameters. VOC, MNA, dissolved metals

Duplicate Sample ID: dMC - MW-11D -R Duplicate) MS/MSD Q.C. Sample Type:

Q.C. Parameters: VOC,

MNA dissolved Metals Trash picked up? Well locked?

SIGNED/SAMPLER:

				Monito	ring Well	_			
	_			- 4	- OMC Groundwa	ter Site			
Well Number	HW-5	015	Field Crew:	56/12W		Purpose of Sam	pling;	OMC Qua	arterly Sampling
Site:	ОМС		Field Conditions	•	D-N/mg F 1	dendy	_		93
Well Pad	<u>-</u>	Acceptable	Not Acceptable	Explain:		 .	,,		
Protective Ca	sing /	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:	,	,		1	
Well Label (o	utside)	Acceptable	Not Acceptable	Explain:	None (very hard 1	to read	')	
Well Label (in	side)	Acceptable(Not Acceptable		vone				
J-Plug		Acceptable	Not Acceptable		None				
Date: 12/5	16	Time: 08	711	PURGE METH Method:	low-flow				
Total Well De	1	= 10 i('	Welliod.	IOW-IIOW				
Depth to Water		= 2.84							
Water Column	, ,	=7.37		1.2					
Comments:				1 volume					
				OBSERVATIO	NS				
Odor:	None , L	ow , High	, H₂S , Fuel	Like , Other		<u>, </u>	····		
Comments:	Very a	ranje "	& (wh.d	of Ster	1 0/10	rge bla	ek pa	thed	afer
			FI	ELD PARAME	TERS		 -		-
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
0820	0.4	300	7.14	2.86	128 4	0.587	6.68	1545	2.93
0825	0.8	300	7.14	1.03	-3.0	0.555	6.93	38.2	2.94
0830	1.2	200	7.21	0.67	-39.3	0.535	7.10	17.0	294
0B35	1.6	700	7.24	0.67	-60.4	0.517	7.21	7.5	2.95
0840	2.0	300	7.25	0.35	-67.3	0513	7.12	4.7	2.95
0845	2.4	300	7.26	0.46	-730	0.510	7.19	4.7	2.95
0950	2.6	300	7.27	0.25	-76.9	0.510	7.16	33	2.95
0855	30	300	7.28	0.31	-80.7	0.510	7.20	2.3	2.95
0900	34	300	7.29	0.22	-431	0.509	7.24	1.6	2.75
0905	SAMi					0 1 7 0 1	,	<u></u>	
		100							
							<u> </u>		
0			· · · · · · · · · · · · · · · · · · ·	SAMPLING	<u> </u>	<u></u>			<u> </u>
Date: (2	3/14		·	Time: 090	5		***		
	£ .	MW-5	015	Method of Sam	ple Collection:	grab			
Analytical Para				/ 44 -	4 A D. B.				
Q.C. Sample T	ν γρe: Δ/Δ	MS/MSD	Duplicate	Duplicate Sam	PCBS				
Q.C. Paramete			- apriority	- spirosso carri	ole ID: V4				
Trash picked u			Wet-lpcked? Y				_		
SIGNED/SAMF	T .		19						
				*		-			
		×_		CONTRACTOR OF STREET					

 -					ring Well OMC Groundwat	ior Cito	 -		,
Well Number:	MW 50	21.0	Field Crew: 1			Purpose of Sami	olina:	OMC Out	arterly Sampling
Site:	OMC		Field Conditions			r urpose or cerni	Julig.	ONC QU	ateny camping
				WELL CONDIT	TION	WINNY	·		
Well Pad		Acceptable	Not Acceptable	Explain:	None	7			
Protective Cas	sing	Acceptable	Not Acceptable	Explain					
Well Casing		Acceptable	Not Acceptable	Explain					
Locking Cap		Acceptable	Not Acceptable	Explain	011				
Well Label (ou	•	Acceptable	Not Acceptable	Explain:	Fu ded				
Well Label (in: J-Plug	side)	Acceptable	Not Acceptable	Explain:	None				
J-Flug		Acceptable	Not Acceptable	Explain: PURGE METH	IOD			 .	
Date: 12/3	19	Time: 080		Method:	low-flow				
Total Well Dep	oth (ft)	= 31-23							
Depth to Wate	er (ft):	= 2.79							
Water Column	(ft):	= 28.44	ŧ	4-6					
Comments:				1 volume					
	<u>.</u>					-:	<u>. </u>		
Odor:	None Lo	w . High		OBSERVATIO Like , Other:	NS				
	clear	i di	20 14- 00 1-50						
	Clear								
			FI	ELD PARAME	TERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
0815	0.44	300	6.84	1.61	-80	0.573	9.27	0.0	2.44
0820	08 41	300	6.95	082	-91.7	0.571	9.67	0.0	2.14
0825	1.2 11	300	720	050	-130.0	0.569	9.45	0.0	2.95
0830	1.641	300	735	0.41	-142.0	0.572	10.04	0.0	2195
0835	200	300	7.42	0.32	-146.8	0.573	10.04	1.1	2.49
0840	24,41	5575	7.48	0-29	-148.3	0.573	10.09	0.0	
0845	28 .1	300	7.52	0.27	~150.1	0.575	10,17	0.0	3.00
	3"	5.00		1	1301	0.5.5	10/17	0.0	3.00
			1						_
		-							
			7						
$\overline{}$	 -	<u>_</u>			<u></u>				
Date: 12/3	Is 4			SAMPLING	,				
39-				Time: 084					
Sample ID: 0 A		_		Method of Sam		grab		0	. 6
nalytical Parar	meters: A	ealinity /	Anions, PC	Bs, 40C,	I MEE, S	ulfile, tol	, diese l	, wel we	fuls
≀.C. Sample Ty	be N 1	MS/MSD -	- Duplicate -	Duplicate Samp	ple ID	٥	h		
C. Parameter	1471		.						
rash picked up	· · · ·	1	Well locked?						
IGNED/SAMP	LEK:		1						

		<u> </u>	Eiol		ring Well OMC Groundwat	er Site			
Well Number:	44 161 <	T125		SCHARC		Purpose of Samp	dina	OMC Ous	rterly Samplin
Site:	OWC	5123	Field Conditions:			r dipose of Camp	/iii ig.	OWO Qua	mony campan
Ono.		~		MELL CONDIT					
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	ing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (out	tside)	Acceptable	Not Acceptable	Explain:	N/A				
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
				PURGE METH	OD				
Date: 12 13	119	Time: 15	: 10	Method:	low-flow				
rotal Well Dep	th (ft)	= 4.90							
Depth to Water		= 1.93	_	m 01					
Nater Column	(ft):	= 4,9:	7	0.81	N.				
Comments:				1 volume					
odor:	None), Lo	w , High	, H₂S , Fuel	Like , Other:					
omments:									
Jomments:			FII	ELD PARAME	TERS				
· · · · · · · · · · · · · · · · · · ·	Volume	Rate	FII pH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity	
· · · · · · · · · · · · · · · · · · ·	Volume (gal)	Rate (mL/min)	1	T	Т	1 '	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water
· · · · · · · · · · · · · · · · · · ·			pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	(NTU)	
5:15		(mL/min)	pH (s.u.) +/- 0.1 s,u, 7, 3 B	DO (mg/L) +/- 10% -7. 24	ORP (mV) +/- 10 mV	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
5:15 15:20		(mL/min) 240 240	pH (s.u.) +/-0.1 s,u, 	DO (mg/L) +/- 10% -7. 24 6, 79	ORP (mV) +/- 10 mV 5 7, 0	Conductance (mS/cmc) +/- 3%	9,30 9,25	(NTU) <10 NTU 3,7	(feet) 1,93 1,93
ime 5:15 15:20 15:25		(mL/min) - 240 240	pH (s.u.) +-0.1 s,u, 7,36 7,28 7,18	DO (mg/L) +1-10% 7.24 6,79 6,13	ORP (mV) +/-10 mV 57, 5 57, 0 58, 7	Conductance (m5/cmc) +/-3% 0,776 0,779 0,781	9,30 9,25 9,20	(NTU) <10 NTU 3,7 0,0	1,93 1,93 1,93
ime 5:15 15:20 15:25		240 240 240 240	pH (s.u.) +1-0.1 s.u. 7.36 7.28 7.18 7.15	DO (mg/L) +1.10% 7.24 6,79 6,13 5,49	ORP (mV) +/-10 mV 5U, 5 57,0 58,7 59,5	Conductance (ms/cmc) +1-3% 0,776 0,779 0,781 0,787	9,30 9,25 9,20 9,20	(NTU) <10 NTU 3,7 0,0 0,1 0,0	1.93 1.93 1.93 1.93
5:15 15:20 15:25 15:30		240 240 240 240 240	pH (s.u.) +1-0.1 s.u. 7.36 7.28 7.18 7.15 7.13	DO (mg/L) +1-10% 7.24 6,79 6,13 5,49 5,03	ORP (mV) +/-10 mV 52, 5 57,0 58,7 59,5 (00.0	Conductance (ms/cmc) +/-3% 0,776 0,779 0,781 0,787 0,790	(°C) 9.30 9.25 9.20 9.20 9.24	3,7 0,0 0,1 0,0	1.93 1.93 1.93 1.93 1.93
5:15 15:20 15:25 15:30 15:35		240 240 240 240 240 240 240	pH (s.u.) +1-0.1 s,u, -1.36 -7.28 -7.18 -7.15 -7.13 -7.12	DO (mg/L) +1-10% 7.24 6,79 6,13 5,49 5,03 4.63	ORP (mV) +/-10 mV 52, 5 57,0 58,7 59,5 (60.0 (60,4	Conductance (m5/cmc) +1-3% 0:776 0:779 0:781 0:787 0:790 0:793	(°C) 9,30 9,25 9,20 9,20 9,24 9,25	(NTU) -10 NTU 3,7 0,0 0,1 0,0 0.0 0.0	1.93 1.93 1.93 1.93 1.93 1.93
5:15 15:20 15:25 15:30 15:35 15:40 5:45		240 240 240 240 240 240 240 240	pH (s.u.) +1-0.1 s.u. 7.36 7.28 7.18 7.15 7.13 7.12	DO (mg/L) +1.10% 7.24 6.79 6.13 5.49 5.03 4.63 4.25	ORP (mV) +/-10 mV 52, 5 57,0 58,7 59,5 (00.0 (00.4 (00.4	Conductance (m5/cmc) +1-3% 0:776 0:779 0:781 0:787 0:790 0:793 0:794	(°C) 9,30 9,25 9,20 9,20 9,24 9,25 9,31	3,7 0,0 0,1 0,0 0.0 0.0	1.93 1.93 1.93 1.93 1.93 1.93
5:15 15:20 15:25 15:30 15:35 15:40 5:45	(gal)	240 240 240 240 240 240 240 240 240	pH (s.u.) +1-0.1 s,u, -1.36 -7.28 -7.18 -7.15 -7.13 -7.12 -7.11 -7.10	DO (mg/L) 41-10% 7.24 6,79 6,13 5,49 5,03 4.63 4.63	ORP (m/v) +1/-10 m/v 52, 5 57,0 58,7 59,5 (00.0 (00.4 (00.4 (00.4	Conductance (ms/cmc) +1.3% 0,776 0,781 0,787 0,790 0,793 0,794 0.790	(°C) 9.30 9.25 9.20 9.20 9.24 9.25 9.31 9.34	3,7 0,0 0,1 0,0 0,0 0,0 0,0	1.93 1.93 1.93 1.93 1.93 1.93 1.93 1.93
15:20 15:25 15:30 15:35 15:40 5:45 15:50	(gal)	240 240 240 240 240 240 240 240 240 240	7.13 7.13 7.13 7.13 7.13 7.13 7.11 7.10 7.08	5.49 5.03 4.25 3.74 5.49	ORP (mv) +/-10 mv 52, 5 57,0 58,7 59,5 (00.0 (00.4 (00.4 (01.1	Conductance (m5/cmc) +1/3% 0,776 0,781 0,787 0,790 0,793 0,794 0,796	(°C) 9,30 9,25 9,20 9,20 9,24 9,25 9,31 9,34 9,34	(NTU) <10 NTU 3,7 0,0 0,1 0,0 0,0 0,0 0,0 0,0	1.93 1.93 1.93 1.93 1.93 1.93 1.93 1.93
5:15 15:20 15:25 15:35 15:35 5:40 5:45 15:50 15:55	(gal)	240 240 240 240 240 240 240 240 240 240	pH (s.u.) +1.0.1 s.u. -1.36	DO (mg/L) 41-10% 7.24 6,79 6,13 5,49 5,03 4.63 4.63	ORP (m/v) +1/-10 m/v 52, 5 57,0 58,7 59,5 (00.0 (00.4 (00.4 (00.4	Conductance (ms/cmc) +1.3% 0,776 0,781 0,787 0,790 0,793 0,794 0.790	(°C) 9.30 9.25 9.20 9.20 9.24 9.25 9.31 9.34	3,7 0,0 0,1 0,0 0,0 0,0 0,0	1.93 1.93 1.93 1.93 1.93 1.93 1.93 1.93
ime 5:15 15:20 15:25 15:35 5:40 5:45 15:50 15:55 16:00	(gal)	240 240 240 240 240 240 240 240 240 240	pH (s.u.) +1.0.1 s.u. -1.36	5.49 5.03 4.25 3.74 5.49	ORP (mv) +/-10 mv 52, 5 57,0 58,7 59,5 (00.0 (00.4 (00.4 (01.1	Conductance (m5/cmc) +1/3% 0,776 0,781 0,787 0,790 0,793 0,794 0,796	(°C) 9,30 9,25 9,20 9,20 9,24 9,25 9,31 9,34 9,34	(NTU) <10 NTU 3,7 0,0 0,1 0,0 0,0 0,0 0,0 0,0	1.93 1.93 1.93 1.93 1.93 1.93 1.93 1.93
ime 5:15 15:20 15:25 15:35 5:40 5:45 15:50 15:55 16:00	(gal)	240 240 240 240 240 240 240 240 240 240	pH (s.u.) +1.0.1 s.u. -1.36	5.49 5.03 4.25 3.74 5.49	ORP (mv) +/-10 mv 52, 5 57,0 58,7 59,5 (00.0 (00.4 (00.4 (01.1	Conductance (m5/cmc) +1/3% 0,776 0,781 0,787 0,790 0,793 0,794 0,796	(°C) 9,30 9,25 9,20 9,20 9,24 9,25 9,31 9,34 9,34	(NTU) <10 NTU 3,7 0,0 0,1 0,0 0,0 0,0 0,0 0,0	1.93 1.93 1.93 1.93 1.93 1.93 1.93 1.93
ime 5:15 15:20 15:25 15:35 5:40 5:45 15:50 15:55 16:00	(gal)	240 240 240 240 240 240 240 240 240 240	pH (s.u.) +1.0.1 s.u. -1.36	5.49 5.03 4.25 3.74 5.49	ORP (mv) +/-10 mv 52, 5 57,0 58,7 59,5 (00.0 (00.4 (00.4 (01.1	Conductance (m5/cmc) +1/3% 0,776 0,781 0,787 0,790 0,793 0,794 0,796	(°C) 9,30 9,25 9,20 9,20 9,24 9,25 9,31 9,34 9,34	(NTU) <10 NTU 3,7 0,0 0,1 0,0 0,0 0,0 0,0 0,0	1.93 1.93 1.93 1.93 1.93 1.93 1.93 1.93
5:15 15:20 15:25 15:35 15:35 5:40 5:45 15:50 15:55 16:00	(gal)	240 240 240 240 240 240 240 240 240 240	PH (S.U.) 4.0.15,U. 4.0.15,U. 4.18 7.18 7.13 7.12 7.11 7.10 7.08 7.09 LED	DO (mg/L) +1.10% 7.24 6.79 6.13 5.49 5.03 4.63 4.63 4.25 3.74 3.74 3.74	ORP (m/v) +1-10 m/v 52, 5 57, 0 58, 7 59, 5 (00.0) (00.4) (00.4) (01.1) (01.0)	Conductance (m5/cmc) +1/3% 0,776 0,781 0,787 0,790 0,793 0,794 0,796	(°C) 9,30 9,25 9,20 9,20 9,24 9,25 9,31 9,34 9,34	(NTU) <10 NTU 3,7 0,0 0,1 0,0 0,0 0,0 0,0 0,0	1.93 1.93 1.93 1.93 1.93 1.93 1.93
ime 5:15 15:20 15:25 15:30 5:35 5:40 5:45 15:50 15:55 16:00	(gal) 	240 240 240 240 240 240 240 240 240 240	PH (S.U.) 4.0.1 S.U. 4.0.1 S.U. 4.0.1 S.U. 4.1.2 B 4.1.5 4.1.2 7.1.1 7.1.0 7.08 7.09 LED	DO (mg/L) 4/-10% 7.24 6,79 6,13 5,49 5,03 4.63 4.25 3,93 3,74 3,74 3,73 SAMPLING	ORP (mv) +1-10 mv 56, 5 57,0 58,7 59,5 60.0 60.4 60.8 60.1 60.1	Conductance (ms/cmc) +1.3% 0,776 0,779 0,781 0,787 0,790 0,793 0,794 0.796	(°C) 9,30 9,25 9,20 9,20 9,24 9,25 9,31 9,34 9,34	(NTU) <10 NTU 3,7 0,0 0,1 0,0 0,0 0,0 0,0 0,0	1.93 1.93 1.93 1.93 1.93 1.93 1.93 1.93
5:15 5:20 15:25 5:30 5:35 5:40 5:45 5:50 15:55 (6:00 10:05	V3.5	240 240 240 240 240 240 240 240 240 240	PH (S.U.) 4.0.1 S.U. 4.0.1 S.U. 4.0.1 S.U. 4.1.2 B 4.1.5 4.1.2 7.1.1 7.1.0 7.08 7.09 LED	DO (mg/L) +/-10% 7.24 6,79 6,13 5.49 5.03 4.63 4.63 7.25 3,93 3.74 3.74 3.73 SAMPLING Time: 16:0 Method of Sam	ORP (mv) +1-10 mv 56, 5 57,0 58,7 59,5 60.0 60.4 60.8 60.1 60.1	Conductance (m5/cmc) +1/3% 0,776 0,781 0,787 0,790 0,793 0,794 0,796	(°C) 9,30 9,25 9,20 9,20 9,24 9,25 9,31 9,34 9,34	(NTU) <10 NTU 3,7 0,0 0,1 0,0 0,0 0,0 0,0 0,0	1.93 1.93 1.93 1.93 1.93 1.93 1.93

Trash picked up?

SIGNED/SAMPLER:

Q.C. Parameters: NA

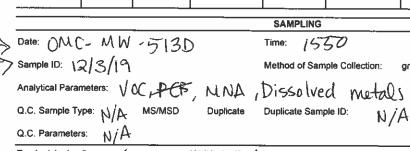
Well looked? Y

			Monito	oring We	II	
		Field	Data Sheet	- OMC Ground	water Site	
Well Number: MW-	-5130	Field Crew: K	na	•	Purpose of Sampling:	OMC Quarterly Sampling
Site: OMC		Field Conditions:	40'F50	MAC		
		V	VELL CONDI	TION		
Well Pad	Acceptable	Not Acceptable	Explain:		-	<u>-</u>
Protective Casing	Acceptable	Not Acceptable	Explain			
Well Casing	Acceptable	Not Acceptable	Explain:			
Locking Cap	Acceptable	Not Acceptable	Explain:			
Well Label (outside)	Acceptable	Not Acceptable	Explain			
Well Label (inside)	cceptable	Not Acceptable	Explain:			
J-Plug	Acceptable	Not Acceptable	Explain:			
· · · · · · · · · · · · · · · · · · ·		F	URGE METH	IOD		
Date: 12/3/19	Time: (50))	Method:	low-flow		
Total Well Depth (ft)	= 73.25	_				
Depth to Water (ft):	= 1.95					
Water Column (ft):	= 21.3		3.5			
Comments:		•	1 volume			
			BSERVATIO	DNS		.
Odor: (None),	Low , High ,	H₂S , FuelL	ike , Other:		•	
Comments:						
		FIE	LD PARAME	TERS	"	
				 	10 7	,

			FI	ELD PARAMET	TERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
itht		200	+/- 0.1 s.u. 7.4	1,79	775	+/- 3%	+/- 3%	<10 NTU	200
1505		250	1,			1-104	11-29	186	2.08
1510		250	727	1.02	67,7	1.127	11.05	13.9	2.08
1515		250	7.26	0.91	61.6	1.135	11.18	90	2.08
1520		250	726	077	57-6	1.138	11-27	7.4	2.08
1530		250	7.25	0.68	52.2	1144	11-20	7-8	2.08
1535	\ \	250	7.24	0.58	45.6	1156	11.09	6.5	2.08
1540	A	250	7.24	0.54	42.0	1.164	11.15	6.2	2.08
1545	v3.5	250	7.24	052	38.4	1.168	11:11	6-2	2005
	Sα	mpled	\Box	1550					
		, '							***
							· ·		_
									L







Trash picked up?

Well locked?

SIGNED/SAMPLER:

			Fie	ld Data Sheet -	 OMC Groundwate 	r Site			
Well Number:	MW	-5168	Field Crew: L	SCHERCH		Purpose of Samp	ling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:	CLOUDY	330F				
	A	7		WELL CONDIT	TON				
Well Pad		Acceptable	Not Acceptable	Explain					
Protective Cas	sing	Acceptable	Not Acceptable	Explain					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain	. I i h				
Well Label (ou	-	Acceptable	Not Acceptable	Explain;	N/H				
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	IÓD				
Date: 13:5	+12/	Time: 12	:53	Method:	low-flow	·			
Fotal Well Dep	クー」(oth (ft)	- 8,19							
Depth to Wate	r (ft):	= 0.46	•						
Nater Column	(ft):	= 7.23	•	181.	2 (KM)				
Comments:				1 volume					
00111111011101									
				OBSERVATIO	NS				
Odor:	Non ,	Low , Hìgh	. H₂S , Fuel	OBSERVATIO					
0	<u> </u>		, H₂S , Fuel						
Odor: (None.		. H₂S , Fuel						
0	CLEAR	R		Like , Other:	TERS	Specific		1	
Comments: (<u> </u>			Like , Other:	1	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
Comments: (LEPT	Rate (mL/min)	PH (s.u.)	Like , Other:	TERS ORP	Conductance (mS/cmc) +/- 3%			(feet)
Comments: (LEPT	Rate	PH (8.u.) +/-0.1 s.u. 7.08	ELD PARAME DO (mg/L)	TERS ORP (mV)	Conductance (mS/cmc)	(°C) +/- 3% 9,12	(UTU) <10 NTU	
Comments: (LEPT	Rate (mL/min)	PH (s.u.)	ELD PARAME DO (mg/L) +/-10%	TERS ORP (mV)	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
0	LEPT	Rate (mL/min)	PH (8.u.) +/-0.1 s.u. 7.08	ELD PARAME DO (mg/L) +/-10% O : 64	ORP (mV) +/- 10 mV 183, 0	Conductance (mS/cmc) +/-3%	9,12 9,12	(UTU) <10 NTU	(feet)
Fime 13: 55	LEPT	Rate (mL/min) 360 240 280	FI pH (su.) +/-0.1 s,u, 7.08 7.08	ELD PARAME DO (mg/L) +/-10% 0 164 0,52 0,42	ORP (mV) +/- 10 mV 183, 0 179, 7	Conductance (mS/cmc) +/-3% 0.750 0.749 0.749	9,12 9,12 8,98 8,99	(NTU) <10 NTU 1 · 5 0 · 9	0,96
13:55 4:00 14:05	LEPT	Rate (mL/min) 360 240 280 200	FI pH (su.) +1-0.1 s.u. 7.08 7.10 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 42 0 - 35	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0	Conductance (mS/cmc) +/-3% 0.750 0.749 0.749 0.749	9,12 9,12 9,99 9,99	(NTU) <10 NTU 1.5 0.9 0,2 0.0	0,96 0,96 0,96 0,96
13:55 4:00 14:05 14:15	LEPT	Rate (mL/min) 360 240 280 200 200	FI pH (su) +-0.1 s, u, 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 35 0 - 28	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0 173.2 169. 7	Conductance (mS/cmc) +1-3% 0.750 0.749 0.749 0.749 0.747	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96
13: 55 4:00 4:05 4:10	Volume (gal)	Rate (mL/min) 360 240 280 200 200 200	FI PH (8u.) +7.015,u, 7.08 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 42 0 - 35	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0 173.2 169. 7	Conductance (mS/cmc) +/-3% 0.750 0.749 0.749 0.749	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96
13:55 4:00 14:05 14:15 14:20	Volume (gal)	Rate (mL/min) 360 240 280 200 200	FI PH (8u.) +7.015,u, 7.08 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 35 0 - 28	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0 173.2 169. 7	Conductance (mS/cmc) +1-3% 0.750 0.749 0.749 0.749 0.747	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96
13:55 4:00 4:05 4:10	Volume (gal)	Rate (mL/min) 360 240 280 200 200 200	FI PH (8u.) +7.015,u, 7.08 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 35 0 - 28	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0 173.2 169. 7	Conductance (mS/cmc) +1-3% 0.750 0.749 0.749 0.749 0.747	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96
Comments: (Volume (gal)	Rate (mL/min) 360 240 280 200 200 200	FI PH (8u.) +7.015,u, 7.08 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 35 0 - 28	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0 173.2 169. 7	Conductance (mS/cmc) +1-3% 0.750 0.749 0.749 0.749 0.747	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96
13:55 4:00 4:05 4:10	Volume (gal)	Rate (mL/min) 360 240 280 200 200 200	FI PH (8u.) +7.015,u, 7.08 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 35 0 - 28	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0 173.2 169. 7	Conductance (mS/cmc) +1-3% 0.750 0.749 0.749 0.749 0.747	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96
13:55 4:00 4:05 4:10	Volume (gal)	Rate (mL/min) 360 240 280 200 200 200	FI PH (8u.) +7.015,u, 7.08 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 35 0 - 28	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0 173.2 169. 7	Conductance (mS/cmc) +1-3% 0.750 0.749 0.749 0.749 0.747	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96
13:55 4:00 4:05 4:10	Volume (gal)	Rate (mL/min) 360 240 280 200 200 200	FI PH (8u.) +7.015,u, 7.08 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 35 0 - 28	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0 173.2 169. 7	Conductance (mS/cmc) +1-3% 0.750 0.749 0.749 0.749 0.747	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96
13: 55 4:00 4:05 4:10	Volume (gal)	Rate (mL/min) 360 240 280 200 200 200	FI PH (8u.) +7.015,u, 7.08 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0.64 0.52 0.42 0.35 0.28 6.25	ORP (mV) +/- 10 mV 183. 0 179. 7 176. 0 173.2 169. 7	Conductance (mS/cmc) +1-3% 0.750 0.749 0.749 0.749 0.747	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96
13: 55 4:00 4:05 4:10	Volume (gal)	Rate (mL/min) 360 240 280 200 200 200	FI PH (8u.) +7.015,u, 7.08 7.08 7.10 7.11 7.11	ELD PARAME DO (mg/L) +/-10% 0 - 64 0 - 52 0 - 35 0 - 28	ORP (mV) +/-10 mV 183.0 179.7 176.0 173.2 169.7 163.2	Conductance (mS/cmc) +1-3% 0.750 0.749 0.749 0.749 0.747	(°C) 41.3% 9,12 8.98 8.99 8.99 8.92	(NTU) <10 NTU 1.5 0.9 0.2 0.0 0.0	0,96 0,96 0,96 0,96 0,96

Q.C. Sample Type: N/A MS/MSD N/A Duplicate N/Duplicate Sample ID: N/A

Q.C. Parameters: $N \mid \chi$ Trash picked up? $\sqrt{}$ SIGNED/SAMPLER:

				Monito	ring Well				
•			Field	d Data Sheet -	OMC Groundwate	r Site			_
Well Number:	Μω	·21612	Field Crew: K	Ma		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:	35 W	ndy				
			\	VELL CONDIT	ION		<u>.</u>		
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	ing	(Acceptable)	Not Acceptable	Explain:					
Well Casing		(Acceptable)	Not Acceptable	Explain:		1			
Locking Cap		Acceptable	Not Acceptable	-	Flush mon	nt			
Well Label (out		Acceptable	Not Acceptable	Explain:					
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					20
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	OD				
Date: 19/10	1/10	Time: 1/2	1400 (icv		low-flow				
Total Well Dep	2/19 oth (ft)	= 75.35							
Depth to Water	r (ft):	-1							
Water Column	(ft):	= 0,97 = 24.31	5	4.0					
Comments:		•		1 volume					
COMMINENTS.									
				OBSERVATIO	N\$				
Odor:	None ,	Low , High	, H ₂ S , Fuel	Like , Other:					
Comments:	Sligi	ntly yel	low						
	U	1 1							
			FII	ELD PARAME	TERS	Cancific	T		· I
Time	Volume (gal)	Rate (mL/min)	рН (s.u.)	00 (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
	-		+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
1405		335	7.17	3.62	189.7	8.033	11,00	0.0	10,99
1410		222	7.33	1.64	515	8,100	1135	0.0	0,99
1415		735	733	1.44	-87.5	8.082	11.53	0.0	.99
1420		225	732	098	-131.7	8.025	11.8	0.0	1-01
1425	<u> </u>	225	7.31	0.85	-133,2	8.015	11-83	0.0	1:02
(430		225	7.31	0.77	- 139.0	7 3/9/3	11.81	0.0	1.00
1435	N 24		731	0.78	-138.9		11.76	00	1.00
1 420					.201	8.012	1010	0.0	1
		anpled	@ 14	40 -				<u> </u>	
						19			
	ļ								
				SAMPLING	·				_
Date: [3/	হ/ ৭			Time: [4	O				
Sample ID:	MC	- MW-5	160	Method of Sar	nple Collection:	grab			
Analytical Para	meters:	VOC. PCR	MNA, D	أعمامي	l In tale				
Q.C. Sample T		MS/MSD) PUNH-, D) Duplicate	Dunlicate Ser	ple ID: N/A				
	ype.	MISHVISU	t D Muta	L Supricate Sall	heir la let				
Q.C. Paramete		OC WINI.	Well to the state of the	17 10 (1)					
Trash picked up		4 King 1	Well locked? N	y (Rib	Y				
SIGNED/SAMF	LEK:		17	1	^				
			L	WWW	4				

Monitoring Well Field Data Sheet - OMC Groundwater Site										
Well Number:	MINI - S	7 QS	Field Crew: L		101	Purpose of Samp	dino:	OMC Qua	arterly Sampling	
Site:	OWC	-0	Field Conditions:			, ,	-00		, , ,	
				WELL CONDIT						
Well Pad		Acceptable	Not Acceptable	Explain:						
Protective Cas	sing	Acceptable	Not Acceptable	Explain:						
Well Casing		Agceptable	Not Acceptable	Explain:						
Locking Cap		Acceptable	Not Acceptable	Explain:						
Well Label (ou	ıtside)	Acceptable	Not Acceptable	Explain:						
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:						
J-Plug		Acceptable	Not Acceptable	Explain:						
	_			PURGE METH						
Date: 12 L	1	Time:		Method:	low-flow					
Depth to Wate		= 5,	> (2							
Water Column			•	0.32						
	. 7.3.	= 1.98		1 volume						
Comments:				TVOIGNIG						
				OBSERVATIO	we.					
Odor:	None , L	.ow . High	, H₂S , Fuel	Like , Other:	10					
Comments:	Tea	·								
	l test	2-11	FI	ELD PARAMET		Specific	Tomo	T	D. of the state	
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV)	Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU)	Depth to water (feet)	
7:46	-	250	+/- 0.1 s,u,	9.04	202.2	0.570	7,99	(10 NTU	3.44	
7:51		250	1700	8,94	191010	13 11011	8.15	_	2 (11)	
	 		1.35		196.0	01497	0,13	0.0	' ' '	
7:56	+ +	250	7,(04	8.90	19/13	0.448	8.36	0.0	3.44	
8:01	1 1	250	7.70	8,39	135,7	0.416	8,50	0.0	3.44	
8:06	-	250	7.73	8.85	181.1	0.471	8,51	0.0	3.44	
<u>8:11</u>	N3	250	7,76	892	177.9	0.471	8.55	0.0	3,44	
8:16		Sam I	150						''	
- 4										
					· · · · · · · · · · · · · · · · · · ·					
									-	
	-									
		<u></u>	<u></u>							
				SAMPLING			-			
Date: 12/	412019			Time: 8 1/4	>					
Sample ID: (mc-n	NW-52	88	Method of Sam	ple Collection:	grab				
			etals, M	AID.						
Q.C. Sample T	vpe: N//A	MS/MSD	Duplicate	Duplicate Sam	ple ID:	\				
			2-22-10-110	- aprilate outil		`				
Q.C. Paramete	1.0.		Mail to tracks	\0			$\overline{}$			
Trash picked u	ι	× na	Well locked?	100/10						
SIGNED/SAMF	PLEK:	1/4//	X ANN K	VVIV	\			$\overline{}$		
			- /					\		

				Monito	ring Well				
	···		Fiel	d Data Sheet -	OMC Groundwat	er Site			
Well Number: Site:	OMC (528:D	Field Crew: (C	·	windy	Purpose of Samp	ling:	OMC Qua	interly Sampling
			4.7	WELL CONDIT	'ION				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (ou		Acceptable	Not Acceptable	Explain:					
Well Label (ins	iide)	cceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	/Not Acceptable	Explain: PURGE METH	OD.				
Date:	12/4/19	Time: 07	40	Method:	low-flow				
ا کی Total Well Dep	. 17	·= 24.	0						
Depth to Wate	r (ft):	= 3.35							
Water Column	(ft):	= 7.3.	65	3.86					
Comments:				1 volume					
			·	OBSERVATIO	NS				
Odor:	None Lo	w High	H₂S Fuel	Like , Other:	201				· ·
Comments: <	slightl	y chould	y during	first ,	VIS MINC	•			
			Fil	ELD PARAME	TERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
			+/- 0,1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
0745		250	6.81	6.59	160.5	1.272	8.05	37.6	3.41
0750		250	688	713	141.6	1-214	10.19	194	3.41
0755		250	7.00	9.29	127.2	1.169	10.89	56	3.41
0800		250	7.03	9.30	123.4	1.160	10,94	2.5	3.41
0805	1//	250	7.07	9.36	118.6	1.147	HU 11:03		3.4/
0810	V	250	7.08	4-41	115.8	1-140	11.05	2.2	3.41
0815	N 3.5	250	7.08	9.41	115.7	1:139	11.05	2.	341
			0.0		1.5	1 15 1	[-	C 1). (1
	ample	9 6	0820						
									
	<u> </u>								
	*			SAMPLING					
Date: 12	13 12	/4/19	(KM)	Time: 08	20				
Sample ID:	MC- N	JW-51	280	Method of San		grab			
Analytical Para	meters: \/C	C. Dics	olved me						
Q.C. Sample Ty					ple ID: N/A				
Q.C. Parameter	rs: NA								
rash picked up			Well locked? y				-		-
SIGNED/SAMP	I FR		MAN						

page 1 of

Monitoring Well Field Data Sheet - OMC Groundwater Site YZNUSS Well Number: MW -6005 Field Crew: Purpose of Sampling: **OMC Quarterly Sampling** sof wina Site: OMC Field Conditions: WELL CONDITION Acceptable Well Pad Not Acceptable Explain **Protective Casing** Acceptable Not Acceptable Explain. Well Casing Acceptable Not Acceptable Explain: **Locking Cap** Acceptable Not Acceptable Explain Well Label (outside) Acceptable 1 Not Acceptable Explain Acceptable Well Label (inside) Not Acceptable Explain: J-Plug cceptable Not Acceptable Explain **PURGE METHOD** Date: 12/6/19 Time: 910 Method: low-flow -1060 Total Well Depth (ft) = 3.74 Depth to Water (ft): Water Column (ft): Comments **OBSERVATIONS** None), High , Odor: Low H2S Fuel Like , Other: Comments: iron locally Colonell Water FIELD PARAMETERS Specific DO (mg/L) Volume Rate ORP Temp Turbidity Depth to water Time ρН (s.u) Conductance (gai) (mL/min) (°C) (NTU) (mS/cmc) +/- 10% +/- 10 mV +/- 3% +/- 3% <10 NTU 7.3Z 1.41 157.8 46.2 78 0.759 7.69 125 325 7.25 0,8 44 8.00 26.8 Z 325 49 128.4 8.1 74 18. 935 113. 425 8.23 3. 0.744 78 940 325 0 .36 0.749 78 7.17 8.29 945 225 28 86.7 7.17 0.750 8.18 78 12.5 950 325 35 754 0,750 8,40 6,8 78 955 325 8.38 7.16 5.3 0.750 00 G 325 7.15 3.0 0.72 8,39 0.754 78 1005 8,35 4.1 7.15 5.78 iolo 7.14 0.28 0.60 3.78 8,50 0.755 1.9 1015 325 7,13 0.19 0,759 8,44 3,78 SAMPLING Date: 12/6/19 Time: (050 Sample ID: 0MC-MW-6005 Method of Sample Collection grab dissided Analytical Parameters: VCC

Q.C. Sample Type: NA

Duplicate Sample ID:

Q.C. Parameters:

Well locked?

Trash picked up? SIGNED/SAMPLER:

			Fiel	Monito d Data Sheet -	OMC Groundwate	er Site			
Well Number:	MW-6	000	Field Crew: V	Ma		Purpose of Samp	ling:	OMC Qua	arterly Sampling
Site:	ОМС		Field Conditions:	320F V	indy				
			١	WELL CONDIT	1 .				
Nell Pad		Acceptable	Not Acceptable	Explain:	muddy				
Protective Casi	ing <	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
ocking Cap	-:	Acceptable)	Not Acceptable	Explain:	اماية				
Vell Label (out Vell Label (insi	-	Acceptable	Not Acceptable	Explain:	olabel				
J-Plug	ue)	Acceptable	Not Acceptable	Explain					
, rag		· Coopidate	•	PURGE METH	OD OD				
Date: 10/6/	19	Time: 90	27	Method:	low-flow				
Total Well Dept	th (ft)	= 25.17	3						
Depth to Water	1000	= 3.81		240	250				
Nater Column	(ft):	21.30		3410	3.5 W				75
Comments:		13		1 volume					
				OBSERVATIO	NS				
Odor: /	None , Lo	ow , High			fist				
Comments:	horok o	articles	doserved		N5 MIV	o of push	٧		
به ا ~	bubbles	absered	4 .Τ A		ell + arci	bucket			
•			FI	ELD PARAME	TERS TO SE			,	1
ïme	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
	-	200			211-2	1	A 8.1		AIO
1920	[225	17.60	1598	16115	11.725	9.41	15 D	1-1-(0
	(9)		7.66	 	209.7	1.795	100	٠	4:10
0925	•	225	7.20	1.20	209.7	1.795	10-15	1-0	410
0925		225	7-20	1.20	209.7	1.795	10-15	٠	410
0 925 0 930 0 935		225	7-20 7-13 7-13	1.20	209.7 205.8 203.6	1.795	10-15	0	4.10
0925 0930 0935 0940		225 225 225	7-20 7-13 7-13 7-09	1.20	209.7 205.8 203.6 201.3	1.795	10-15	1.0	4.10
0 925 0 930 0 9 35 0 9 40 0 9 45		225 225 225 225 225	7-20 7-13 7-13 7-09 7-08	1.20 1.13 1.67 0.65 3.00	209.7 205.8 2036 201.3 199.1	1.795	10-15	0 0	4.10 4.10 4.10 4.10 3.98
0 925 0 930 0 9 35 0 9 4 0 0 9 4 5 0 9 5 0		225 225 225 225 225 225	7-20 7-13 7-13 7-09 7-08 7-04	1.20 1.13 1.67 0.65 3.00 2.92	209.7 205.8 203.6 201.3 199.1	1.795 1.827 1.836 1.846 1.855 1.843	10-15 10-44 10-50 10-77 10-23	0 0 0 0 0	4.10 4.10 4.10 4.10 3.98 3.98
0 925 0 935 0 9 35 0 9 40 0 9 45 0 9 50		225 225 225 225 225 225 225 225	7-20 7-13 7-13 7-09 7-08 7-04	1.20 1.13 1.67 0.65 3.00 2.92 2.54	209.7 205.8 203.6 201.3 199.1 199.7	1.795 1.827 1.836 1.846 1.855 1.843 1.844	10.15 10.44 10.50 10.77 10.23 10.28	0 0 0 0 0	4.10 4.10 4.10 4.10 3.98 3.98
0 925 0 935 0 9 35 0 9 40 0 9 45 0 9 50 0 9 55 100 0		225 225 225 225 225 225 225 225 225	7-20 7-13 7-13 7-09 7-08 7-04 7-04 7-03	1.20 1.13 1.67 1.65 3.00 2.92 254 2.61	209.7 205.8 203.6 201.3 199.1 199.7 199.6	1.795 1.827 1.836 1.846 1.855 1.843 1.844	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0	4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 0 935 0 9 35 0 9 40 0 9 45 0 9 50 0 9 55 100 0	NY	225 225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-08 7-04 7-04 7-05	1.20 113 1.67 0.65 3.00 2.92 2.54 2.61 2.60	209.7 205.8 203.6 201.3 199.1 199.7	1.795 1.827 1.836 1.846 1.855 1.843 1.844	10.15 10.44 10.50 10.77 10.23 10.28	0 0 0 0 0 0	4-10 4-10 4-10 3-98 3-98 3-98
0 925 0 935 0 9 35 0 9 40 0 9 45 0 9 50 0 9 55 100 0		225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-08 7-04 7-04 7-05	1.20 113 1.67 0.65 3.00 2.92 2.54 2.61 2.60	209.7 205.8 203.6 201.3 199.1 199.7 199.6	1.795 1.827 1.836 1.846 1.855 1.843 1.844	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 0 930 0 9 35 0 9 40 0 9 45		225 225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-08 7-04 7-04 7-05	1.20 113 1.67 0.65 3.00 2.92 2.54 2.61 2.60	209.7 205.8 203.6 201.3 199.1 199.7 199.6	1.795 1.827 1.836 1.846 1.855 1.843 1.844	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 0 935 0 9 35 0 9 40 0 9 40 0 9 50 0 9 50 100 0 100 5	- Sa	225 225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-08 7-04 7-04 7-05	1.20 113 1.67 0.65 3.00 2.92 2.54 2.60	209.7 205.8 203.6 201.3 199.7 199.7 199.6 199.6	1.795 1.827 1.836 1.846 1.855 1.843 1.844	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 0 935 0 9 35 0 9 40 0 9 45 0 9 50 0 9 55 100 0 (005	- Sa	225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-08 7-04 7-04 7-05 0-1010	1.20 1.13 1.67 0.65 3.00 2.92 2.54 2.60 SAMPLING	209.7 205.8 2036 201.3 199.7 199.7 199.6	1.795 1.87 1.836 1.846 1.855 1.843 1.849 1.850	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 1 93 1 0 9 35 0 9 40 0 9 40 0 9 50 0 9 50 100 0 (005 Date: \2/6/	19 40-M1	225 225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-08 7-04 7-04 7-05 P 1010	1.20 113 1.67 0.65 3.00 2.92 2.54 2.60 SAMPLING Time: \O	209.7 205.8 203.6 201.3 199.7 199.7 199.6 199.6	1.795 1.827 1.836 1.846 1.855 1.843 1.844	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 1 93 1 0 9 35 0 9 40 0 9 50 0 9 50 100 0 (005 Date: \2/6/ sample ID: 00	IQ MC - M1 meters: V	225 225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-08 7-04 7-04 7-05 0-1010	1.20 113 1.67 0.65 3.00 2.92 2.54 2.60 SAMPLING Time: \O	209.7 205.8 203.6 201.3 199.7 199.7 199.6 199.6	1.795 1.87 1.836 1.846 1.855 1.843 1.849 1.850	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 0 935 0 935 0 940 0 945 0 950 0 955 0	IQ MC - MI meters: V	225 225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-08 7-04 7-04 7-05 P 1010	1.20 113 1.67 1.65 3.00 2.92 2.54 2.60 SAMPLING Time: \O	209.7 205.8 203.6 201.3 199.7 199.7 199.6 199.6	1.795 1.87 1.836 1.846 1.855 1.843 1.849 1.850	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 1 93 1 0 9 35 0 9 40 0 9 40 0 9 50 0 9 50 100 0 (005 Date: \2/6/	IQ MC - MI meters: V	225 225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-09 7-09 7-09 7-05 P 1010	1.20 113 1.67 1.65 3.00 2.92 2.54 2.60 SAMPLING Time: \O	209.7 205.8 203.6 201.3 199.7 199.7 199.6 199.6	1.795 1.87 1.836 1.846 1.855 1.843 1.849 1.850	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 0 935 0 935 0 940 0 945 0 950 0 955 0	IQ MC - MI meters: V rpe: N/A	225 225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-09 7-09 7-09 7-05 P 1010	1.20 113 1.67 1.65 3.00 2.92 2.54 2.60 SAMPLING Time: \O	209.7 205.8 203.6 201.3 199.7 199.7 199.6 199.6	1.795 1.87 1.836 1.846 1.855 1.843 1.849 1.850	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 3.98 3.98 3.98 3.98
0 925 0 935 0 940 0 945 0 940 0 945 0 950 0 955 0 955 0 956	Treters: V	225 225 225 225 225 225 225 225 225 225	7-20 7-13 7-09 7-08 7-09 7-09 7-05 0 1010 Ouplicate	1.20 113 1.67 1.65 3.00 2.92 2.54 2.60 SAMPLING Time: \O	209.7 205.8 203.6 201.3 199.7 199.7 199.6 199.6	1.795 1.87 1.836 1.846 1.855 1.843 1.849 1.850	10-15 10-44 10-50 10-77 10-23 10-28 10-41	0 0 0 0 0 0	4.10 4.10 4.10 4.10 3.98 3.98 3.98 3.98

Field Data Sheet - OMC Groundwater Site											
Well Number: MW6015 Field Crew: K. Links Purpose of Sampling: OMC Quarterly Sampling											
Site:	OMC				windy ,	بالمماء					
				WELL CONDIT	ION						
Well Pad		Acceptable	Not Acceptable	Explain:	under hat	tr					
Protective Cas	sing	cceptable	Not Acceptable	Explain:							
Well Casing		Acceptable	Not Acceptable	Explain:							
Locking Cap		Acceptable	Not Acceptable	Explain:							
Well Label (ou	tside)	Acceptable	Not Acceptable	Explain							
Well Label (ins	side)	Acceptable	Not Acceptable	Explain							
J-Plug		Cceptable	Not Acceptable	Explain:							
Date: 12 2	Isa	Time: \3		PURGE METH Method:	low-flow per	.)					
Total Well Dep	•	= 10.6		111001001	ion per	•					
Depth to Wate		= 164 2 2									
Water Column	PS .	= -1 2 2		1.2							
Comments:	1112	4:5		1 volume							
Comments.											
				OBSERVATION	NS						
Odor:	None Lo	w , High	, H₂S , Fuel	Like , Other:							
Comments:	Orange	turbid	water in	first &	uple minu	ites of po	urg they				
	J				,	,	3 0				
			FI	ELD PARAMET	Γ	Specific					
Time	Volume (gal)	(mL/min)	pH (s.u.)	DO 0/ to 1 (mg/L) 41.0	(mV)	Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)		
	-		+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	-W		
1345		300	7:15	6-16	-56.3	0.955	6.34	78	39.32		
1350	\vdash	300	7.14	1.89	-78.8	0.965	7.33	30	34.38		
1355		400	7.19	0.92	-89.5	0.973	7.77	13.5	340		
1700		400	7.26	0.58	-48.6	0.965	807	2.0	3.40		
1405		400	7.29	0.42	-104.4	0.946	8.04	1,3	340		
1410		400	7.32	0.36	-104.8	0.909	8.13	00	3.41		
1415		400	7.37	0.24	-112.2	0.889	8.09	0.0	3.41		
1420	W	400	7.39	0.28	-111.2	0.868	8.05	0.0	3 42		
1425	N5	400	7.41	024	- 112.7	0.854	8-15	00	3.42		
				21	11,20,1						
	J				<u>.</u>	}	<u> </u>				
D-1 in 1a	1			SAMPLING							
Date: 2 / 2				Time: 142							
Sample ID: O	MC-ML	v-6015		Method of Sam		grab					
Analytical Para	meters: Phy	ions/to	c/ 541 Frod	c, to har 1	A dissolved	l metals,	VOCS 1	4 É F			
Q.C. Sample Ty		MS/MSD		Duplicate Samp			1	- ·			
Q.C. Parameter	s: All										
Trash picked up	n? Y		Vell locked?	7							
SIGNED/SAMP	LER:	Ch									

-			Fie	Monito	OMC Groundwat	er Site			
Vell Number:	Mw-	6011	Field Crew: 56	SIKW	9 1	Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	OMC	-			vereust				
				WELL CONDIT	ION				¥
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain	Α				
Well Casing		Acceptable	Not Acceptable	Explain					
ocking Cap		Acceptable	Not Acceptable	Explain:					
Vell Label (ou	utside)	Acceptable	Not Acceptable	Explain:					
Well Label (in:	side)	Acceptable	Not Acceptable	Explain:					
I-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	OD.				
Date: 1212	119	Time: 13	32	Method:	low-flow				
otal Well Dep		= 24.9							
Depth to Wate	er (ft):	= 3.21							
Vater Column	n (ft)	= 21 40		3.5					
Comments:				1 volume					
			įΨ.						
	-			OBSERVATIO	NS				
Odor:	None 📿							93	
comments:	Black	Portico	vates &	28hat	of Dwg	e, clea	red U	5 1-	25mi-
		·							
			FI	ELD PARAME	TERS				
	Matuma	Data	1	200	ODG.	Specific	Tomp	T	D
ime	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) (G	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
	(gal)	(mL/min)	+/- 0.1 s,u,		(mV) +/- 10 mV	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
350	(gal) 	(mL/min) = 150	+/-0.1 s,u,	(mg/L) SG	(mV) +/- 10 mV	Conductance (mS/cmc) +/-3%	(°C) +/- 3% 9.60	(NTU) <10 NTU //8	(feet) 3-28
3 50	(gal) 0 2	(mL/min) - 150 /50	6.60 6.59	(mg/L) SG	(mV) +/- 10 mV -/- 0 4	Conductance (mS/cmc) +/- 3% /- 188 2. 038	(°C) +1-3% 9 &0 9.33	(NTU) <10 NTU //8	((eet) 3-28 3.29
3 50 355	(gal) 0.2 6.4	(mL/min) - 150 /50	41-0.1 s,u, 6.60 6.59 0.58	(mg/L) SG	(mV) +/- 10 mV -/- 0 4 -0 7-2 _0.47	Conductance (mS/cmc) +/-3% 1-788 2-038 2,044	(°C) +1-3% 9-60 9-33 9-34	(NTU) <10 NTU //8 7.7 7.8	3.28 3.29 3.29
350 1355 1100	(gal) 0 2	(mL/min) - i50 /50 /50	6.60 6.59 6.58 6.56	(mg/L) /G +/- 10% 9-3 4-2 3-8-2	(mV) +1.10 mV -1.04 -072 -0.47 -0.43	Conductance (mS/cmc) +/-3% 1.988 2.038 2,044 2.067	(°C) +1-3% 9-60 9-33 9-39 9-39	(NTU) <10 NTU //8 7.7 7.8 4.5	3.28 3.29 3.29 3.29
3 50 355	(gal) 0.2 6.4	(mL/min) - 150 /50	41-0.1 s,u, 6.60 6.59 0.58	(mg/L) 5G +1-10% 4-10% 4-12 3-02 6-29	(mV) +1.10 mV -1.04 -0.72 -0.47 -90.2	Conductance (ms/cmc) +/-3% 1. 988 2.038 2.044 2.067 2.098	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41	(NTU) <10 NTU //8 7.7 7.8 4.5	3.28 3.29 3.29
350 1355 1100	(gal) 0.2 0.6	(mL/min) - i50 /50 /50	6.60 6.59 6.58 6.56 6.55 6.48	(mg/L) /G +/- 10% 9-3 4-2 3-8-2	(mV) +1.10 mV -1.04 -072 -0.47 -0.43	Conductance (mS/cmc) +/-3% 1.988 2.038 2,044 2.067	(°C) +1-3% 9-60 9-33 9-39 9-39	(NTU) <10 NTU //8 7.7 7.8 4.5	3.28 3.29 3.29 3.29
3 50 355 400 405	(gal) 	(mL/min) - 150 150 150 150	6.60 6.59 6.58 6.56 6.55	(mg/L) 5G +1-10% 4-10% 4-12 3-02 6-29	(mV) +1.10 mV -1.04 -0.72 -0.47 -90.2	Conductance (ms/cmc) +/-3% 1. 988 2.038 2.044 2.067 2.098	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41	(NTU) <10 NTU //8 7.7 7.8 4.5	3-28 3-29 3-29 3-29 3-29
350 355 400 405 410	(gal) 0 2 6 4 0 6 0 8 1.0	(mL/min) 150 150 150 150 150	6.60 6.59 6.58 6.56 6.55 6.48	(mg/L) 5G +1-10% 4-12 3-8-2 6-29 0-23	(mV) +1.10 mV -1.04 -0.72 -0.47 -90.2 -88.5	Conductance (ms/cmc) +1-3% 1-988 2-038 2-044 2-067 2-098 2-161	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31	(NTU) <10 NTU 1/8 7.7 7.8 4.5 4.0 2.3	3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 1355 1400 1405 1410 1415 1420 1425	(gal) 0.2 6.4 0.6 0.8 1.0 1.2 1.4 1.6	(mL/min) 150 150 150 150 150 150	6.60 6.59 6.58 6.56 6.55 6.48 6.45	(mg/L) /G +/-10% /G 4-2 L 3-8 E 6-29 6-21	(mV) +1.10 mV -1.04 -0.72 -0.47 -90.72 -88.5 -87.3	Conductance (m5/cmc) +1-3% 1-988 2-038 2-044 2-067 2-067 2-161 2-204	(°C) 4-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23	(NTU) <10 NTU 1/8 7.7 7.8 4.5 4.0 2.3 2.2	3.29 3.29 3.29 3.29 3.29 3.29
350 1400 1405 1405 1415 1420 1425 1430	(gal) 0.2 6.4 0.6 0.8 1.0 1.2 1.4 1.6 1.9	(mL/min) 150 150 150 150 150 150 150	6.60 6.59 6.58 6.56 6.53 6.48 6.45 6.43	(mg/L) /G +1-10% 9-3 4-2 2 6-29 0-23 6-21 0-20	(mV) 41.10 mV -1.04 -072 -047 -90.2 -88.5 -87.3 -96.9	Conductance (ms/cmc) +1.3% 1.988 2.038 2.044 2.067 2.098 2.161 2.204 2.227	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 1355 1400 1405 1410 1415 1420 1425	(gal) 0.2 6.4 0.6 0.8 1.0 1.2 1.4 1.6 1.9	(mL/min) 150 150 150 150 150 150 150	6.60 6.59 6.58 6.56 6.53 6.48 6.45 6.43	(mg/L) /G +1-10% 9-3 4-2 2 6-29 0-23 6-21 0-20	(mV) 41.10 mV -1.04 -072 -047 -90.2 -88.5 -87.3 -96.9	Conductance (ms/cmc) +1.3% 1.988 2.038 2.044 2.067 2.098 2.161 2.204 2.227	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 1400 1405 1405 1415 1420 1425 1430	(gal) 0.2 6.4 0.6 0.8 1.0 1.2 1.4 1.6 1.9	(mL/min) 150 150 150 150 150 150 150	6.60 6.59 6.58 6.56 6.53 6.48 6.45 6.43	(mg/L) /G +1-10% 9-3 4-2 2 6-29 0-23 6-21 0-20	(mV) 41.10 mV -1.04 -072 -047 -90.2 -88.5 -87.3 -96.9	Conductance (ms/cmc) +1.3% 1.988 2.038 2.044 2.067 2.098 2.161 2.204 2.227	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 1400 1405 1405 1415 1420 1425 1430	(gal) 0.2 6.4 0.6 0.8 1.0 1.2 1.4 1.6 1.9	(mL/min) 150 150 150 150 150 150 150	6.60 6.59 6.58 6.56 6.53 6.48 6.45 6.43	(mg/L) /G +1-10% /G 4-2 / 3-8 2 6-29 0-23 6-21 0-20	(mV) 41.10 mV -1.04 -072 -047 -90.2 -88.5 -87.3 -96.9	Conductance (ms/cmc) +1.3% 1.988 2.038 2.044 2.067 2.098 2.161 2.204 2.227	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 1355 1400 1405 1415 1420 1425 1430	(gal) 02 64 0.6 0.8 1.0 1.2 1.4 1.6 1.9 5 AM	(mL/min) 150 150 150 150 150 150 150	6.60 6.59 6.58 6.56 6.53 6.48 6.45 6.43	(mg/L) /G +/-10% /G 4-2 L 3-8 E 6-29 0-23 6-21 0-20 0-17	(mV) +1.10 mV -1.04 -0.72 -0.43 -90.2 -88.5 -87.3 -96.9 -97.)	Conductance (ms/cmc) +1.3% 1.988 2.038 2.044 2.067 2.098 2.161 2.204 2.227	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 355 400 405 410 1415 1420 1425 1430	(gal) 02 64 0.6 0.8 1.0 1.2 1.4 1.6 1.9 5 AM	(mL/min)	6.60 6.59 6.58 6.56 6.53 6.48 6.47 6.42	(mg/L) /G +/-10% /G -/-10%	(mV) -1.04 -1.04 -0.47 -0.43 -90.2 -87.3 -96.9 -97.1	Conductance (ms/cmc) +1.3% 1.988 2.038 2.044 2.067 2.098 2.161 2.204 2.227	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 355 400 405 410 1415 1420 1425 1430 435	(gal) 02 64 0.6 0.8 1.0 1.2 1.4 1.6 1.9 5 AM	(mL/min) 	6.60 6.59 6.56 6.56 6.53 6.48 6.45 6.43	(mg/L) 5G +/- 10% 9-3 6-29 0-23 6-21 0-17 SAMPLING Time: 143 Method of Sam	(mV) +1.10 mV -1.04 -0.72 -0.43 -90.2 -88.5 -57.3 -96.9 -97.)	Conductance (ms/cmc) +1.3% 1.988 2.038 2.044 2.067 2.098 2.161 2.204 2.227	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 355 400 405 410 1415 1420 1425 1430 435	(gal) 02 64 0.6 0.8 1.0 1.2 1.4 1.6 1.9 5 AM	(mL/min) 	6.60 6.59 6.56 6.56 6.53 6.48 6.45 6.43	(mg/L) 5G +/- 10% 9-3 6-29 0-23 6-21 0-17 SAMPLING Time: 143 Method of Sam	(mV) +1.10 mV -1.04 -0.72 -0.43 -90.2 -88.5 -57.3 -96.9 -97.)	Conductance (ms/cmc) +1-3% 1.788 2.038 2.044 2.067 2.098 2.161 2.204 2.227 2.247	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 355 400 405 410 1415 1420 1425 1430 435	(gal) 0 2 6 4 0 6 0 8 1 0 1.2 1.4 1.6 1.9 5 AM	(mL/min) 	6.60 6.59 6.58 6.56 6.53 6.48 6.47 6.42	(mg/L) 5G +/- 10% 9-3 6-29 0-23 6-21 0-17 SAMPLING Time: 143 Method of Sam	(mV) +1.10 mV -1.04 -0.47 -0.43 -90.2 -87.3 -96.9 -97.)	Conductance (ms/cmc) +1-3% 1.788 2.038 2.044 2.067 2.098 2.161 2.204 2.227 2.247	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 355 400 405 410 1415 1420 1425 1430 4435 ate: /2/2 ample ID: ((gal) 0 2 6 4 0 6 1.0 1.2 1.4 1.6 1.9 5 AM Infinite on C-M ameters: Vicinity on C-M	(mL/min) 	6.60 6.59 6.56 6.56 6.53 6.48 6.45 6.43 6.42	(mg/L) /G +/- 10% /G -/- 10% /G -/- 23 -/- 27 -/- 0 20 -/- 0 17 -/- 18 -/- 18 -	(mV) +1.10 mV -1.04 -0.47 -0.43 -90.2 -87.3 -96.9 -97.)	Conductance (ms/cmc) +1-3% 1.788 2.038 2.044 2.067 2.098 2.161 2.204 2.227 2.247	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29
350 355 400 405 410 415 415 415 4130 4135 ate: /2/2 ample ID: (analytical Para)	(gal) 0.2 6.4 0.6 0.8 1.0 1.2 1.4 1.6 1.9 5.AM Type: NA ameters: Vit	(mL/min) 	6.60 6.59 6.56 6.56 6.53 6.48 6.45 6.43 6.42	(mg/L) /G +/- 10% /G -/- 10% /G -/- 23 -/- 27 -/- 0 20 -/- 0 17 -/- 18 -/- 18 -	(mV) +1.10 mV -1.04 -0.47 -0.43 -90.2 -87.3 -96.9 -97.)	Conductance (ms/cmc) +1-3% 1.788 2.038 2.044 2.067 2.098 2.161 2.204 2.227 2.247	(°C) 41-3% 9-60 9-33 9-39 9-39 9-41 9-31 9-23 9-40	(NTU) <10 NTU //8 7.7 7.8 45 40 2.3 22 2.1	3.29 3.29 3.29 3.29 3.29 3.29 3.29 3.29

			B.6. 14					13.1
		Fie	Monitor	ing Well OMC Groundwate	er Site			
Well Number: MW-	6078	Field Crew:	SCHARCE	1	Purpose of Sam	pling:	OMC Qua	arterly Sampling
Site: OMC			SUNNY					
			WELL CONDITIO					
Well Pad	Acceptable	Not Acceptable	Explain:		<u> </u>		<u></u>	
Protective Casing	Acceptable	Not Acceptable	Explain					
Well Casing	Acceptable	Not Acceptable	Explain:					
Locking Cap	Acceptable	Not Acceptable	Explain:	O LOCK	S			
Well Label (outside)	Acceptable	Not Acceptable	Explain					
Well Label (inside)	Acceptable	Not Acceptable	Explain:					
J-Plug	Acceptable	Not Acceptable	Explain:					
			PURGE METHO	D				
Date: 1214119	Time: Q	อร์		ow-flow				
Total Well Depth (ft)	= 9.24	,				5		
Depth to Water (ft):	= 7.94							
Water Column (ft):			1.0					
Train Goldson (ty.	= 6:32							
Comments:			1 volume					
			OBSERVATIONS				·	***
Odor: None ,	(ow) High	, H₂S , Fuel	Like , Other					
Comments: EMP	TED FLOW	THROUGH	x CELL	@ 9:34	AND BE	DAN PU	MPING.	LMINUTE
มน	ETV TUE	2BIDITY	ELD PARAMETE					
Time Volume	Rate	pH (s.u.)	00 0	IRP	Specific Conductance	Temp	Turbidity	Depth to water
(gal)	(mL/min)	, , ,	1	nV)	(mS/cmc)	(°C)	(NTU)	(feet)
7:10 7	200	+/- 0.1 s,u,	()	10 mV	+/- 3%	+/- 3%	<10 NTU	- 00
טויו עויו		7.58	1.94	137.4	0.544	7.11	2.0	2.30

	FIELD PARAMETERS											
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU)	Depth to water (feet)			
9:10		200	7.58	1.94	197.4	0.544		<10 NTU	2.30			
9:15		240	7,48	0.91	181.5	0.548	7.52	0.0	2.32			
9:20		240	7.40	2.23	174.3	0.539	8.22	2.1	232			
9.25		320	7.37	1.14	164.6	0,543	8.54	0.5	2.32			
9:30		320	7.38	Oile1	148.6	0.546	7.92	35,2	2.32			
9:35		320	7,39	10,33	132,6	0.012	8118	0.0	2.98			
9:40		320	7.36	0,87	119.3	0,535	8.95	18.2	3.02			
9.45		300	7.33	0,38	96,1	0.536	8.92	10.8	3.02			
9:50		300	7.33	0.22	75.2	0.535	8,94	3,9	3,02			
9:55		300	7,33	0.36	57.2	0.535	8,98	1.2	3,02			
10:00		300	7.32	0,18	38.2	0,535	8.48	0,0	3,02			
10:05	V	300	7.32	0,16	21.3	0,534	9.22	0,0	3.02			

SAMPLING Date: 12/4/19

Time: 1055

Sample ID: OMC-MW-6025

Method of Sample Collection:

Analytical Parameters: VOC3, MNA, MHAUS

Q.C. Sample Type: N/A MS/MSD Duplicate Du

Duplicate Sample ID: N/A

Q.C. Parameters: NA

Trash picked up?

Monitoring Well Field Data Sheet - OMC Groundwater Site											
Well Number:	Mwi-	1.02 S	Field Crew:		-	Purpose of Sam	olina:	OMC Out	arterly Sampling		
Site:	OMC	GO L3	Field Conditions	· · · · · · · · ·	н	r dipose oi Qaiii	piirig.	OMC Que	arterly Sampling		
		<u>_</u>	riola Colladorio	WELL CONDIT	ION	<u>. </u>			····		
Well Pad		Acceptable	Not Acceptable	Explain:							
Protective Casi	ing	Acceptable	Not Acceptable	Explain:							
Well Casing		Acceptable	Not Acceptable	Explain:	5	EE PG.	1				
Locking Cap		Acceptable	Not Acceptable	Explain:							
Well Label (out	side)	Acceptable	Not Acceptable	Explain:							
Well Label (insi	de)	Acceptable	Not Acceptable	Explain:							
J-Plug		Acceptable	Not Acceptable	Explain:							
		-		PURGE METH	OD	-					
Date:		Time:		Method:	low-flow						
Total Well Dept	h (ft)	=									
Depth to Water	(ft):	=									
Water Column	(ft):	=				SEE PO	a. 1				
Comments:				1 volume							
				OBSERVATIO	NS						
Odor:	None ,	w, High	, H₂S , Fuel	Like , Other:							
Comments:											
		Τ-	FI	ELD PARAMET	ERS	In a site.					
lime .	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance	Temp (°C)	Turbidity (NTU)	Depth to water (feet)		
			+/- 0.1 s,u,	+/- 10%	+/- 10 mV	(mS/cmc) +/- 3%	+/- 3%	<10 NTU			
0:10		300	7.31	0.36	7.9	0.534.	9,31	0.0	3:02		
1015		300	7.32	Oillo	-5,2	10,534	9,39	0,0	3102		
n:20		240	7,21	11.15	-17.8	11.525	9.24	11.0	3.01		
10:25		240	7.31	0.16	- 77 7	1 521.	9,31	00	3.02		
	-	240		10,0	20.0	11.536		0.0	<u> </u>		
10:30		C= 1 11	7.31	0,23	- 29.2	0.536	9,21	0.0	3102		
0:35	_	240	7.31	0.14	-40.3	0.537	9,32	0, ()	3,02		
10:40		240	7.32	0,33	-43.9	0.538	9.32	0.0	3.02		
10:45	\bigvee	240	7.31	0.23	-47.3	0.538	19,23	0.0	3.02		
0:50	NB	240	7.29	0.23	- 52.2	B. 537	9,25	0.0	3:02		
0.55	. (sample		55-					0.00		
4.2.3		- 17 W	10-10								
,				-					<u> </u>		
		L									
	i			SAMPLING							
ate: [2]4]	2019			Time: 10:	55						
ample ID:				Method of Sam	ple Collection:	grab	see y	oa 1			
							ا	3 -			
nalytical Param	neters:										
nalytical Param .C. Sample Typ		MS/MSD	Duplicate	Duplicate Samp	ele ID:						
	oė:	MS/MSD	Duplicate	Duplicate Samp	ele ID:						
.C. Sample Ty	oe: :: 		Duplicate Well locked?	Duplicate Samp	ele ID:						

				Monito	ring Well				
			Fiel	id Data Sheet -	OMC Groundwate	er Site			
Well Number:	MW-(OSO	Field Crew: '/.	M	300	Purpose of Sam	oling	OMC Qua	arterly Sampling
Site:	ОМС		Field Conditions:	35°F	Windy				
145-11-5-1			·	WELL CONDIT	ION ,	 .			<u></u> .
Well Pad	er.	Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain	. ()				
Locking Cap	A-Cal-A	Accomplable	Not Acceptable		w lock				
Well Label (out	•	Acceptable	Not Acceptable	Explain					
Well Label (ins	side)	Acceptable	Not Acceptable	Explain					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	OD				
Date: 12/4	+/19	Time: 091		Method:	low-flow				
Total Well Dep	-,	= 25.9	203 -						
Depth to Water	r (ft):	=3.14							
Water Column	(ft):	= 22.7	8	37					
Comments:		•		1 volume					
		<u>.</u>		OBSERVATIO	NS				-
Odor:		ow , High		Like , Other:					
Comments:	dade	suspend	ed parti	des fils	+ NISM	ins of Do	irse		
			, , , ,			., , ,	- G		
	:	Ī.,	Fil	ELD PARAMET		Specific	L	1	
Time	Volume (gal)	Rate (mL/min)	ρΗ (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
0.000	a a	0.7	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/= 3%	+/- 3%	<10 NTU	- 2 0 0
0910		250	7.68	2.11	-28.3	2.46	10.96	0	3.20
0415		250	+.73	1-74	-111 7	2.497	11-22	0	3.20
<u> </u>	100	20	7.55	150	-157-9	2.534	11.51	0	3.20
0925		250	7-52	1.45	-150.3	2.541	1176	0	3.20
0930		250	7.48	1.40	-162.8	2553	11.79	0	320
0935		เรง	744	1.34	-163,9	2.573	11.84	0	3.20
0940		250	F.44	1-31	-163.8	2.583	11-80	O	3,20
0945	N3.5	250	7.43	(.3)	-163.8	2 583	11.85	0	3.20
0950		· .	100	5D+0		C 765	11,03		
0430		sample	a a c	00+0	130				
								-	
							<u> </u>		<u> </u>
				SAMPLING					
Date:	12/4	/19		Time: 09 4	50 + 09	55 (fi))		
Sample ID:	WOMC.	MW-GO	2 N	Method of Sam	ple Collection:	grab			
Analytical Parar	meters:	(60		A44) A C	· astrad	2 / 2			
Q.C. Sample Ty	/pe:	MS/MSD	Duplicate	Duplicate Sami	DISSOLVELL	いったい			
Q.C. Parameter					. 01	MC-MW-6	200-R		
Trash picked up	4001	MNA.	Well locked?		<u>N) </u>				
SIGNED/SAMP	[Well locked: V	1					
			/// -				<u></u>		
			UV						

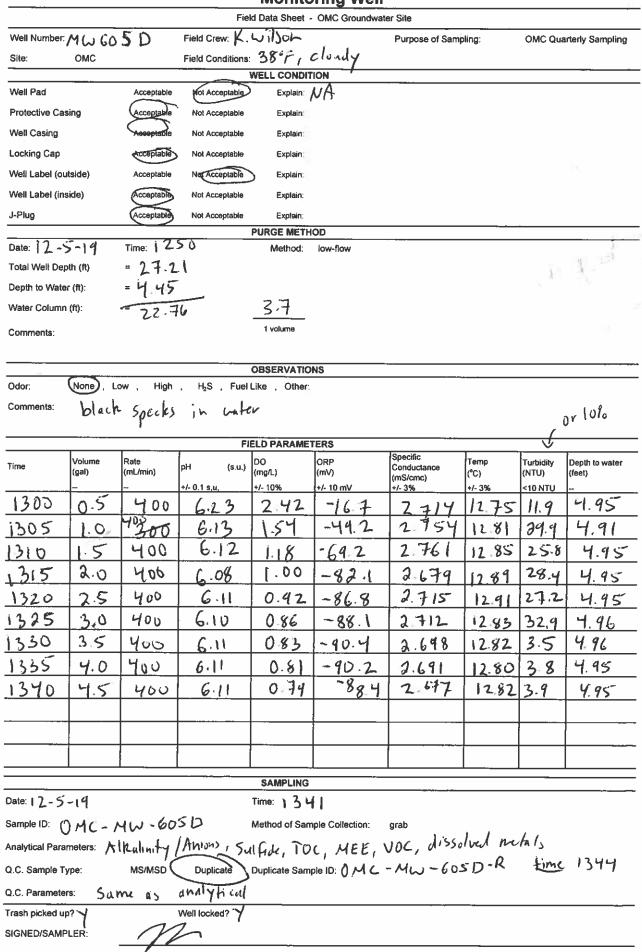
Monitoring Well										
					OMC Groundwar	ter Site				
Well Number:	WM-	288	Field Crew: L.	SCHAR	CH	Purpose of Sam	pling:	OMC Qua	rterly Sampling	
Site:	OMC		Field Conditions	CLUUD	4 43°F	-				
		78		WELL CONDIT	IDN '					
Well Pad		Acceptable	Not Acceptable	Explain:	42 in	iches of and well	Chand	ina	water	
Protective Cas	sing	Acceptable	Not Acceptable	Explain:	5 (1	3 1001 1001		V 100.	
Well Casing		Acceptable	Not Acceptable	Explain:	ONO	ina well	nest			
Locking Cap		Acceptagle	Not Acceptable	Explain		·				
Well Label (ou	tside)	Acceptable	Not Acceptable	Explain						
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:						
J-Plug		Acceptable	Not Acceptable	Explain:						
	-1			PURGE METH						
Date: / 2/		Time: 12	:52	Method:	low-flow					
Total Well Dep		=10.9								
Depth to Water	r (ft):	= 3.23								
Water Column	(ft):	= 7,73	3	1.3						
Comments:				1 volume						
				- 3						
=-			<u> </u>	OBSERVATIO	NS					
Odor:	None , L	ow), High	H ₂ S), Fuel	Like , Other:						
Comments:		-								
			FI	ELD PARAMET	TERS .	I Canadia	Т			
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance	Temp (°C)	Turbidity (NTU)	Depth to water (feet)	
		-	+/- 0 1 s,u,	+/- 10%	+/- 10 mV	(mS/cmc) +/- 3%	+/- 3%	<10 NTU		
12:55		280	7,90	11.23	199.1	1.464	8.02	19.9	328	
13:00		280	7.71	10.64	2197	0.454	7.99	10.5	2,28	
13.05		2920	7.87	040	1.22.	0.44	9,16	U i	2 14	
Čn sa a	H	-	7 40	0.01	222	0.445		7.6	2 011	
13:10	 	280	7,70	0.39	723,6	0.43+	1011	3:2	3,24	
13:15		280	7,42	0.28	223,0	0.433	8.19	117	3.24	
13:20	<u> </u>	230	7.39	0,25	222.4	0.435	8.25	10.8	3.24	
13:25	W	280	7.34	0,24	221,8	0.427	I -	10.5	3,24	
13:30	N3	200	7,33	0.23	221.3	0.439	8.37		3.24	
13:35	LA.	SAMPI	1	0.20		0.107	0.34	0,0	T	
1919)		ו שויומני	<i>*1)</i>			<u> </u>				
				SAMPLING						
Date: 2	5/2010	1	:	Time: 13:3					·	
Sample ID:			n2(Method of Sam		grab				
Amahataat 5	TT[0-1	· 100 Q	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0		pio Genecuoni	8144				
Anaiytical Parar	neters: \	UCs ,M	letals, N	INA						
Q.C. Sample Ty	rpe: N/D	MS/MSD	Duplicate	Duplicate Samp	ole ID: N/A					
Q.C. Parameter	s: N/A									
Frash picked up		10-	Well locked?	_						
SIGNED/SAMP	LER!	XW	X_1010	auch	J					
				WW C C C C C						

				Eial	Field Data Sheet - OMC Groundwater Site					
	Well Number:	MW- los	130							rterly Sampling
	Site:	OMC	030	Field Conditions:						,
	<u> </u>	ONO		Tield Conditions.	WELL CONDIT	ION		<u></u>		
	Well Pad Protective Cas	ina	Acceptable	Not Acceptable Not Acceptable	Explain:	N Shuh	es at sta	nding w	atv	
	Well Casing		Acceptable	Not Acceptable	Explain:	arun	d well neg	1		
	Locking Cap			Not Acceptable	Explain:					
	Well Label (out	teida)	Acceptable	Not Acceptable	Explain:					
		-	Acceptable							
	Well Label (ins	ide)	Acceptable	Not Acceptable	Explain					
	J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	OD				<u>-</u>
	Date: 12/5/	lica	Time: 125		Method:	low-flow				
	Total Well Dep		= 20,5							
	Depth to Water	r (ft):	= 2.88		- 0					
	Water Column	(ft)	13.7	4	3.9					
	Comments		8211	1	1 volume					
					OBSERVATIO	NS				
	Odor:	None (Lo	ow) High	H ₂ S Fuel	Like , Other:					
	Comments									
				FI	ELD PARAMET	TERS	la			·
	Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
	1255	1	N 250	(0.32	2.53	55.4	a 795	11-78	5.3	4.52
_	1300		250	(0.11	2.94	26.3	8.810	11.78	13	4.52
em	1305	-SE	NSORL	-	PAUSE			RUBES		
1315	1310	1	250	5-90	0.52	3 3	3.011	11.34	2.3	5.01
=	1315		250	5.90	0.70	-30.7	2,917	1/ 4/	0	5.01
() 22()						-37.1		·		i
	1325	 	250	5.90	0.73	1 4	298	11.39		5.01
	1330	 	250	5-91	0.56	- 42.1	2.977	11.36	0	4.80
	1335	V	250	5.89	0.51	-51.6	2,992	11.25	U	4.80
	1340	N4	250	5.89	0.50	-51,2	2.997	11.17	0	420
			pled	@ 134	5					
		34.	7	(2)						
				-				1		-2
		,			SAMPLING				-	
	Date: 12/5	/19			Time: (34)	<				
	Sample ID:	MC-N	W-692	0	• •	nple Collection:	grab			
	Analytical Para	meters: \12	no Non	olved Met	la MAI	A				
	Q.C. Sample Ty	ر کر ype: ار ype: ار ype: ار ype: ار ype: ا	MS/MSD	Duplicate	Duplicate Sam					
		=	-	,		17/14				
	Q.C. Parameter	19/11		Man in al 40						
	Trash picked up			Well locked?						
	SIGNED/SAMP	LER:								

Field Data Sheet - OMC Groundwater Site										
Well Number: MW-10045 Field Crew: 515/KV Purpose of Sampling: OMC Quarterly Sampling										
Site:	OMC	<i>y</i> 0-(<i>)</i>	Field Conditions:	S	1,01Cas)		•		,,	
				WELL CONDIT		=:				
Well Pad		cceptable	Not Acceptable	Explain:						
Protective Cas	ing	Aceeptable	Not Acceptable	Explain:						
Well Casing		Acceptable	Not Acceptable	Explain:						
Locking Cap		Acceptable	Not Acceptable	Explain:						
Well Label (out	tside)	Acceptable	Not Acceptable	Explain:						
Well Label (ins	ide)	tcceptable	Not Acceptable	Explain:						
J-Plug		Acceptable	Not Acceptable	Explain:						
Date 1)/5	110	Time: 1/1/		PURGE METH	low-flow					
Total Well Dep	/ [r th /ft)	Time: 141	_	Method:	IOW-IOW					
Depth to Water		= 2.0								
Water Column		= 8.0		1.3						
	(i.y.	- 5 .0	1	1 volume						
Comments:				1 75 6510						
		 _		OBSERVATIO	vs.					
Odor:	None), Lo	w High		Like , Other:	10					
Comments	2/ /	- 12	3							
	Cloud	4 C 81	tert of 1	ourge						
		-00 This 020		ELD PARAMET	ERS			-		
Time	Volume	Rate	pH (s.u.)	DO (CONT)	ORP	Specific Conductance	Temp	Turbidity	Depth to water	
	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)	
1430	0.4	400	7.37	4.84	576	1.037	834	540	2.70	
1435	0.8	400	207	0.44	-112.6	1,048	947	3/3	2.70	
1440	1,2	400	7.06	0.33	-112.7	1.046	8.52	21.5	2.70	
1445	1.6	400	7.05	0.20	-115.9	1,041	855	12.0 -	-2.70	
1450	2.0	400	7.05	0.18	-116.2	1.044	8.60	9.6	2.70	
1455	2.4	400	7.05	6.15	-116.9	1.044		5.4	2.70	
1500	2.8	UOO	2.05	0.13	-117.7	1.640	8.60		2.70	
1505		nepci			36.	10	, ,	<u> </u>	2.70	
1) 03	0-1	fue a								
			÷		1					
	<u> </u>		***							
	-1			SAMPLING		· · · · · · · · · · · · · · · · · · ·				
Date: 17/5			ı	Time: 157	95					
Sample ID: 0				Method of Sam	ple Collection:	grab				
Analytical Parar	meters: U	OL, MN	A, DISSE Duplicate	1et	. 1 .					
Q.C. Sample Ty	pe NA	MS/MSB	Duplicate	Duplicate Samp	ole ID: \mathcal{U}/\mathcal{A}	-				
Q.C. Parameter		- []			1					
Trash picked up? Wellbeked?										
SIGNED/SAMP	LER:		0	•						
		#								

				Monito	ring Well				
			Fiel	d Data Sheet -	OMC Groundwate	er Site			
Well Number:	MW	604D	Field Crew: K	سردانسا	, ,	Purpose of Samp	•	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions:			, slight u	ninil		
Well Pad		Acceptable	Not Acceptable	WELL CONDIT	ION				
Protective Cas	nina			Explain:					
	siiig	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap	المامتماد	Acceptable	Not Acceptable	Explain:					
Well Label (or	·	Acceptable	Not Acceptable	Explain					
Well Label (ins	side)	Acceptable Acceptable	Not Acceptable	Explain:					
		Ассериаце	Not Acceptable	Explain: PURGE METH	OD			_	
Date: 12-5	5-19	Time: 14		Method	low-flow				-
Total Well Dep	oth (ft)	= 30.05	5						
Depth to Wate	er (ft):	= 2.88							
Water Column	(ft):	= 27.17	7	4.4					
Comments:				1 volume					
				OBSERVATIO	NS				·
Odor:	None	, Low , (High) H₂S , Fuell	Like Other:	المام من المام المام	14/605	12 /	als.	6161
Comments:	924	mater. 5	mall blugh	partici	المدريدا	y (605)	D 0043	P1120	ל דובמים
	<u> </u>		draws do	-44 11 111	2001 2001				
	T		FI	CLO PARAME	IENS	Specific	L		T
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
11100		200	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
1430			6.86	317	88.2	3.341	11.13	14.8	3.88
1435	+	200	6.30	1.36	-873	3.054	11.34	8.1	3.85
1440	-	300	6.23	1.12	-76.8	2.484	11.10	7.7	34.84
1445	\sqcup	200	6.21	1.03	73.8	2.943	11.18	62	383
1450		/ 200	6.18	0.44	-71.0	2891	11.28	5.4	3.83
1455	A	200	6.17	0.90	-70.6	2876	11.16	7.6	3.84
1500	~3	200	6.17	0.86	-70.7	2.857	11.26	74	3.85
e				-		1			
		10		1					
									<u></u>
						1			
							<u> </u>		
	- JA			SAMPLING					
Date: 12-5				Time: 150					
	– ,	MW-604	-	Method of Sam		grab			
Analytical Para	meters:	Alkalinty 1/	Anions, Sull	Fide, dis	silved meta	15, 501 70	C, MEE	, VO	<u>_</u>
Q.C. Sample T			Duplicate				•	•	
Q.C. Paramete	rs: NA								
Trash picked up			Well locked?						
SIGNED/SAMP		11	~ ·						
		-/-//			· · · · · ·				

Monitoring Well Field Data Sheet - OMC Groundwater Site Well Number: MW-6055 Field Crew: 56/KW OMC Quarterly Sampling Purpose of Sampling: Site: Field Conditions: 38 F Our ask WELL CONDITION Well Pad Acceptable Not Acceptable Explain **Protective Casing** Not Acceptable Exclain Well Casing Not Acceptable Explain: Locking Cap Acceptable Explain: Not Acceptable Well Label (outside) Acceptable Not Acceptable Explain: Well Label (inside) Explain: Not Acceptable Acceptable > J-Plug Not Acceptable Explain **PURGE METHOD** Date: /2/5/19 Time: / 25 Method: low-flow Total Well Depth (ft) Depth to Water (ft): Water Column (ft): Comments: **OBSERVATIONS** None H2S , Fuel Like , Other: Odor: Low High . Comments FIELD PARAMETER\$ Specific ORP Temp Depth to water (feet) DO Volume Rate Turbidity (s.u.) Conductance Time (mV) (NTU) (mg/L) (gal) (mL/min) (°C) (mS/cmc) +/- 10% +<u>/- 10 mV</u> +/- 3% /- 0.1 s.u +/- 3% <10 NTU 425 0,5 0.810 9.04 65.4 30 24.4 11.66 425 0800 -39.5 9.02 36.0 7.17 1.1 0.57 -73.1 0.773 9.02 0.30 1.6 425 1 124 12 -848 0.23 8.99 1.12 2.2 425 3.1 8,97 0.19 -94.2 0:430 4.13 2.8 424 2. 8,94 -93.3 0.717 3.3 425 0.16 0.0 7.14 893 0.712 3.7 6.15 -1000 SAMPLING Date: 1215/19 Time: Sample ID: 6M(-MW-605) Method of Sample Collection grab Analytical Parameters: VOC5; MNA, D.55 Tet.
Q.C. Sample Type: MA MS/MSD Duplicate Duplicate S Q.C. Sample Type: WA Duplicate Sample ID: N/4 Q.C. Parameters: Trash picked up? Well booked? SIGNED/SAMPLER:



Field Data Sheet - OMC Groundwater Site Well Number: AW 606 5 Field Crew: 56/6W Purpose of Sampling: OMC Quarterly Sampling Site: OMC Field Conditions: 30 F Owc of t W. wdg Well Conditions: 4 Well Conditions: 4 Well Cannot Casing Acceptable Explain: Well Pad Acceptable Not Acceptable Explain: Well Casing Acceptable Not Acceptable Explain: Well Label (outside) Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain: Depth to Water (ft): = 41.18 Water Column (ft): = 5, 64
Site: OMC Field Conditions: 30° F Owcast W. Ind. Well Pad Well Casing Well Casing Well Casing Acceptable Not Acceptable Explain: Not Acceptable Explain: Not Acceptable Explain: Well Casing Acceptable Acceptable Not Acceptable Explain: Not Acceptable Explain: Well Label (outside) Acceptable Acceptable Not Acceptable Explain: Not Acceptable Explain: Well Label (inside) Acceptable Acceptable Not Acceptable Explain: Time: Acceptable PURGE METHOD Method: low-flow Total Well Depth (ft) = 9.87 Depth to Water (ft): = 11.15 Water Column (ft): = 5.64 OBSERVATIONS
Well Pad Acceptable Protective Casing Protective Casing Acceptable Not Acceptable Explain: Well Casing Acceptable Not Acceptable Explain: Well Casing Acceptable Not Acceptable Explain: Well Label (outside) Acceptable Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Acceptable Acceptable Explain: Acceptable Explain: Acce
Protective Casing Well Casing Acceptable Not Acceptable Explain: Not Acceptable Explain: Locking Cap Acceptable Not Acceptable Not Acceptable Explain: Well Label (outside) Acceptable Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Acceptable Not Acceptable Explain: Explain: Fully Purge Method: Iow-flow Total Well Depth (ft) Eq. 8:7 Depth to Water (ft): Water Column (ft): Solume OBSERVATIONS
Well Casing Locking Cap Acceptable Not Acceptable Not Acceptable Explain: Well Label (outside) Well Label (inside) Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain: Well Label (inside) Not Acceptable Explain: Full Caunal Cack PURGE METHOD Date: ///51/1 Time: 0772 Method: low-flow Total Well Depth (ft) = 9.872 Depth to Water (ft): = 41.18 Water Column (ft): = 5.64 OBSERVATIONS
Locking Cap Acceptable Acceptable Acceptable Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Acceptable Not Acceptable Explain: Explain: Furge METHOD Date: // 1/1 Time: 0770 Method: low-flow Total Well Depth (ft): Explain: 5-71 y to tall Caune (etc.) PURGE METHOD Method: low-flow Total Well Depth (ft): Explain: Furge METHOD Method: low-flow OBSERVATIONS
Well Label (outside) Acceptable Explain: FURGE METHOD Date: // 5/14 Time: 0770 Method: low-flow Total Well Depth (ft) = 9.87 Depth to Water (ft): = 41.18 Water Column (ft): = 5.64 OBSERVATIONS
Well Label (inside) Acceptable Not Acceptable Not Acceptable Explain: 5-7/g to tall Caunal ork L PURGE METHOD Date: /L/5/1/1 Time: 0770 Method: low-flow Total Well Depth (ft) = 4.8.7 Depth to Water (ft): = H.18 Water Column (ft) = 5.64 OBSERVATIONS
J-Plug Acceptable Not Acceptable Explain: 5-21 g to tall Caunal ork L- PURGE METHOD Date: /// Time: 0720 Method: low-flow Total Well Depth (ft) = 9.8.2 Depth to Water (ft): = 11.18 Water Column (ft): = 5.64 0.92 Toolume OBSERVATIONS
Date: /L/51/1 Time: 0770 Method: low-flow Total Well Depth (ft): = 4.18 Water Column (ft): = 5.64 0.92 Comments: OBSERVATIONS
Date: // 5/19 Time: 0720 Method: low-flow Total Well Depth (ft) = 9.8.2 Depth to Water (ft): = 118 Water Column (ft): = 5.64 0.92 Comments: OBSERVATIONS
Total Well Depth (ft) = 9.8.7 Depth to Water (ft): = H. 18 Water Column (ft): = 5.64
Depth to Water (ft): = H. B Water Column (ft): = 5, 64
Comments: 1 volume OBSERVATIONS
Comments: 1 volume OBSERVATIONS
OBSERVATIONS
Odor: None Low , High , H ₂ S , Fuel Like , Other:
Comments:
douby @ Stat at purge
FIELD PARAMETERS Volume Rate DO ORP Specific Temp Turbidity Depth to water
Time Volume Rate (gal) (mL/min) PH (s.u.) DO ORP Conductance (mS/cmc) (°C) (NTU) (feet)
0730 0.4 400 6.55 3.84 1672 0 648 699 59.8 4.68
File
0740 1.2 400 7.55 0.54 102.9 8 650 731 3.4 4.68
0111 1.8 (00 1.10)
0750 20 400 7.85 0.25 764 0.652 734 00 4.65
1755 25 450 193 6.21 57.8 0652 7.88 60 4.68
8800 3.0 450 8.00 0.18 47.4 0.652 7.80 0.3 8.73
0405 35 450 8.05 0.16 20.3 0.653 8.00 1.5 4.74
0810 4.0 450 9.08 6.15 2.4 0.653 8.03 0.5 4.25
0515 9.5 456 9.10 0.14 -12.2 0.654 8.08 60 4.75
0820 5.0 450 811 0.12 -284 0.654 8.17 0.1 4.76
SAMPLING Date: /2/5/15 Time: 0/5/5/5
Sample ID: 0Ml-Mu/- Co(5) Method of Sample Collection: grab
Analytical Parameters: VDCS MNA, DISS Mel.
Q.C. Sample Type: 1//2 MS/MSD Duplicate Duplicate Sample ID: 1//4
Q.C. Parameters: N/A /
Trash picked up? Well locked?
SIGNED/SAMPLER:
1/1
\mathcal{U}

			Fie	d Data Sheet -	OMC Groundwate	er Site			
Well Number:	MW-6	055	Field Crew:			Purpose of Samp	ling:	OMC Qua	rterly Sampling
Site:	OMC	*1.5 %	Field Conditions						
144.8.5.4				WELL CONDIT	ION				
Well Pad	ī	Acceptable	Not Acceptable	Explain					P. 2 of
Protective Cas	sing	Acceptable	Not Acceptable	Explain					1
Well Casing		Acceptable	Not Acceptable	Explain:		~ ~ ~ ~		1	
Locking Cap		Acceptable	Not Acceptable	Explain:	-	see	Sol	(
Well Label (ou	tside)	Acceptable	Not Acceptable	Explain					
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain					
				PURGE METH					
Date:	4- 400	Time:		Method:	low-flow				
Total Well Dep		=				1			
Depth to Wate	* ***	=		Se	e pg	ار			
Water Column	(ft):	=			- 19				
Comments.				1 volume					
						100000			
				OBSERVATIO	NS				
Odor:	None Lo	w High	, H₂S Fuei	Like Other:					
Comments:	28		31						
		ln	FI]	ELD PARAMET	T***	Specific	J		<u> </u>
ime	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	(mV)	Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
34.0	-		+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
9830	60	456	8-11	0.11	~407	0.654	8.25	0.2	4.75
0835	65	450	9.13	0,11	-49.7	0,656	813	0.0	4.74
0840	70	450	813	0.10	-56.0	0.657	8.16	00	74.75
6845	75	450	4 14	0:10	-61.7	6.65%	8-22	15	1.71
0850	8-0	450	814	0.70	-63.4	0.618	B. 09	1 60	475
3/2	C/1	1137		0.70	-51	070	0.01	0.6	9.77
•81)	121	MY-C							
						ļ			
									
	,			SAMPLING	7	<u></u>			·
,	/			Time:					
Date: 145		Se	Las	Method of Sam	ple Collection:	grab			
. (-		y (*	العجا						
Date: 145 Sample ID:	meters.		17 1						
iample ID:			Dunlicata	Dunlicate Same	ole ID:				
iample ID: nalytical Paral i.C. Sample Ty	/pe:	MS/MSD	Duplicate	Duplicate Sam	ole ID:				
ample ID:	/pe: rs:	MS/MSD	Duplicate Well locked?	Duplicate Sam	ole (D:				

		.		Monito	ring Well			5	5 4
	11 /	^ - / m			OMC Groundwate	er Site		_	
Well Number:	•	>06D	_	محدارتما.		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	ОМС		Field Conditions	・ <u> </u>	hindy don	dy		77	
Well Pad		Acceptabl	Not Acceptable	Exptain:		r			
Protective Cas	ing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		cceptable	Not Acceptable	Explain:					
Well Label (out	tside)	Acceptable	Not Acceptable	Explain:					
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
Date: 12 - 6	-19	Time: 07	-15	PURGE METH Method:	low-flow				
Total Well Dep	,	= 27.86		11100100.					
Depth to Water		= 4.14	,						
Water Column	(ft):	73.6	1	39					
Comments:		() W	ı	1 volume					
				OBSERVATIO	NS	_			
Odor:		ow , High	, H₂S , Fuel	Like , Other:					
Comments: dark	gryi	black	specks in	water	, bio film	on water.			
		<u> </u>	FI /	ELD PARAMET	1	Specific	L /	FO	
ľime	Volume (gal)	Rate (mL/min)	ρH	(mg/L)	ORP J (mV)	Conductance (mS/cmc)	(°C)	Turbidity (NTU)	Depth to water (feet)
5 H 2 -	0.2	3200	+/- 0.1 s,u,	4.02	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	
0730		- 35	6.73		-11,6	3,196	900	45-8	5.33
0735	≈ .35°	100	6.73	2.16	-84.1	3.184	8.04	76.+	6.06
0740	× . S	100	6.70	1.54	- 99.4	3.210	783	34.5	6.05
	2,65	100	6.63	1.27	-97.2	3.266	8 23	11:0	612
0750	2.8	100	6.59	1.17	-94.4	3.170	4.36	14.3	6.18
5755	2.95	100	6.57	1.08	-92.2	3.301	8.52	17.3	620
008C	~1.1	100	6.54	1.07	-91.4	3.352	8.43	9.3	6.19
3805	21,25	100	6.52	1.01	- 42.6	3.319	8.56	4.8	6.18
0810	1.5	100	6.51	0.97	- 91.1	3.310	8.54	4.4	6.20
12					7/				
				6					
			·	SAMPLING					
Date: 12 -6	-14				7	# DiAva	1 de tra	250	
Sample ID: 0	MC- M	W-ENE	D	Method of Sam	ple Collection:	grab	L Wall	-176	envescong in Same a
Analytical Paran	neters: A i	h.1.11	IA.	1 f. 4	11		1000 11	er T	(Same a
Q.C. Sample Ty	ا ۲۱ De: ۲۱۸	MS/MSD_	Duplicate	Duplicate Same	OLISSITY-CAT	metals, V	ics, M.	ו נטן	
.C. Parameters	. 1411								
rash picked up		·	Well locked? Y						
IGNED/SAMPI		1	2						
			- Lan-						

				MOTITE	illig well				
	84 . 4			-611	OMC Groundwate				
Well Number		77)	Field Crew:		,	Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions	WELL CONDIT	ION				_
Well Pad	0	Acceptable	Not Acceptable	Explain:					
Protective Ca	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (or	rtside)	Acceptable	Not Acceptable	Explain:					
Well Label (in	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
Date: / 2/4	1/16	Time: /D/	10	PURGE METH Method:	OD low-flow				
Total Well De	. ,	= 9.84	U	Method.	IOW-HOW				
Depth to Wate		= 3.49							
Water Column	3.0	= 6.35	_	(.0					
Comments:		ψ,)		1 volume					
Comments.									
	- 250			OBSERVATIO	NS				_
Odor:	None L	ow . High	, H₂S , Fuel	Like , Other:		2 5			
Comments:	Heav	y over	go pre	c. o. lake	@ Shr	t of Do) ge		
				ELD PARAMET					
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) / +/- 3%	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
1020	80.5	375	814	1.99	-171.8	0.386	5.24	<10 NTU	3.54
1025	1.0	375	8.04	0.48	-185.8	0.383	5.22	1.4	3.54
1030	1.5	375	8.00	0.20	-17-04	0 377	5.13	0.4	3.54
1035	2.0	315	197	0:15	-165,9	0.375	5.15	0.8	3.54
1640	2.5	375		0.11	-1705	0373		3.3	
	(2.)	_	1.75	0.11		0717	SII	10.0	3.54
1045	241	rre			1			1	
	 	·							
							<u> </u>		
	<u> </u>								
	ļ		<u>.</u>						
151				SAMPLING		···	-		
Date: 2/4/				Time: /0	45				
Sample ID: 0	MC-M	W-6079	<u>}</u>	Method of Sam	ple Collection:	grab			
Analytical Para	meters. U	OC M/V	1 Diss.	met					
Q.C. Sample T	ype: <i>V/8</i>	MS/MSD	Duplicate	Duplicate Samp	ole ID:N/1_				
Q.C. Paramete	//	A			, •				
Trash picked u	p? V	1	Well lacked?	•					
SIGNED/SAMF	PLER:	(f	<u></u>						
		X							
			ez-						

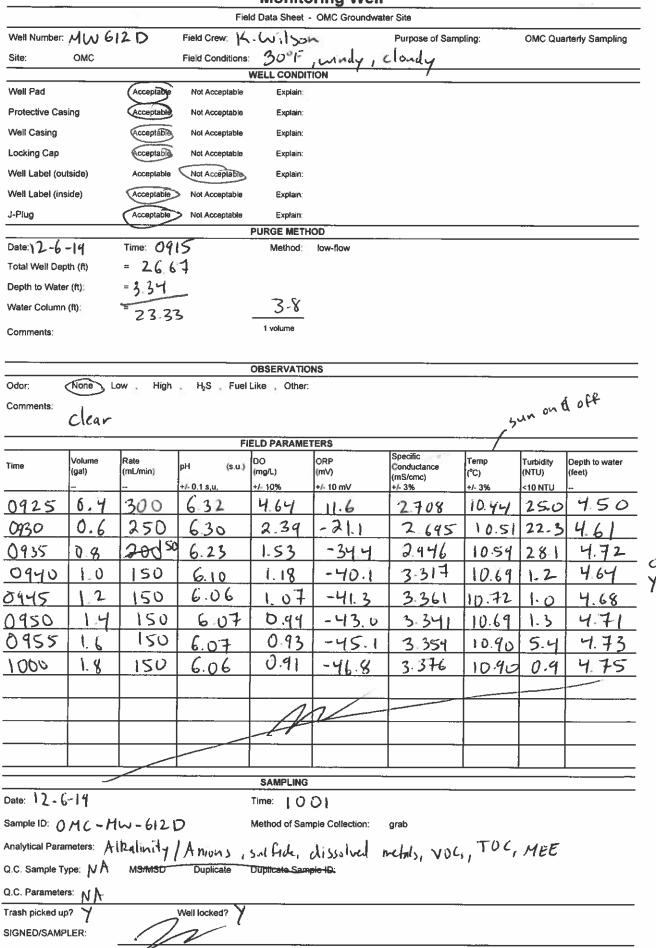
Monitoring Well											
Field Data Sheet - OMC Groundwater Site											
Well Number:	MW	507P	Field Crew: /			Purpose of Samp	oling:	OMC Qua	rterly Sampling		
Site:	OMC		Field Conditions:	36°F,	synny, wi	ndy					
142.00				WELL CONDIT	TION						
Well Pad		Acceptable)	Not Acceptable	Explain:							
Protective Casi	ing	Acceptable	Not Acceptable	Explain:							
Well Casing		Acceptable	Not Acceptable	Explain:							
Locking Cap		Acceptable	Not Acceptable	Explain:							
Well Label (out	·	Acceptable	Not Acceptable	Explain:							
Well Label (insi	ide)	Acceptable	Not Acceptable	Explain:							
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	IOD						
Date: 12/4	119	Time: O (Method:	low-flow			.			
Total Well Depl		= 27-6	5								
Depth to Water	(ft):	= 3.12									
Water Column	(ft):	= 24.5	2	4.0							
Comments:				1 volume							
OBSERVATIONS											
Odor: None Low , High , H ₂ S , Fuel Like , Other:											
Comments:	clear										
	Volume	Rate	,	DO PARAME	ORP	Specific	Temp	Turbidity	Depth to water		
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)		
1015	0.2	250	+/-0.1 s.u. 7.38	2-47	57.5	1-123	10.70	<10 NTU	450		
1020	04	,50	7.09	1.36	- 27			4.3	W		
1025		1	,	1.15	59.5	1549	10.14	1-1	4.16		
1030	0-8	120	7.02	0.91	60.2 52.8			0.4	4.20		
		 	7.00		3.4	1.784	10.46	0.0	4.23		
1035	1.0	120		0.85	46.1	1.447	10.48		130		
1040	1.2	150	7.19	0.80	30.5	1.445	10.33		4.20		
1045	1-4	150	7.31	0.76	17-0	2.014	10.45		4.20		
1050	1.6	150	7.51	0.74	-8-0	2.052	10.43	0.0	4.20		
1055	1.8	150	7.68	0.71	-43.8	2.065	10-61	0.0	4.20		
1100	2.0	(50	7.84	0-69	-831	2.085	10.54	00	420		
1105	2.2	150	7.99	0.68	-124.9	2.137		0.0	4-20		
1110	24	150	7.43	0.66	-1424	2.075	10.67	0-0	4.20		
				SAMPLING							
Date: 12-4	1-19			Time: 112	В						
Sample ID: 0					nple Collection.	grab					
Analytical Paran	neters: 🗚	halinity/	Anions, su	Ifile, d	issolved me	Hals, TOC,	MEE, V	oc.			
C. Sample Ty			Duplicate			•	•				
Q.C. Parameters	NA				Fen	ous Iron	= 0.29	5 ma	/L		
Trash picked up? Y Well locked? Y											
SIGNED/SAMPL	ER:	M									
		1									

				Monito	oring Well		1.0		
			Fiel	d Data Sheet	- OMC Groundwate	er Site			
Well Number:	MW	6070	Field Crew:)	الماءاءم		Purpose of Samp	oling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions:	37°F,	sunny, h	igh winds	•		
				WELL CONDIT	TION				-
Well Pad		Acceptable	Not Acceptable	Explain					
Protective Cas	ing	Acceptable	Not Acceptable	Explain					
Well Casing		Acceptable	Not Acceptable	Explain		9	SPI	1 1	
Locking Cap		Acceptable	Not Acceptable	Explain:		,	Sec	PZ +	_
Well Label (out		Acceptable	Not Acceptable	Explain:					
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	200				
Date:		Time		Method:	low-flow				
Total Well Dep	th (ft)	=							
Depth to Water	(ft):	=					_		
Water Column	(ft):	=			Se	c py	7		
Comments:				1 volume		10			
Comments:									
	-			OBSERVATIO	NS				
Odor:	None	, Low , High		Like , Other:					
Comments:			Sc	Pt 7					
			<i>J</i>	Port	-				
			FI	ELD PARAME	TERS	In 10			
Time	Volume (gal)	Rate (mL/min)	pH (s.u.) +/- 0.1 s.u,	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
1115	26	3150	802	0.65	-158.5	2:111	10.87	0.0	4.20
1120	2.8	15000	7.95	0.64	157.5	2-081	11-00	0.0	4.22
1125	1	1 2- 45	8-03	0.63	-165.3	2 126			422
1165	3 (1,00	0.03	0.63	163.3	2 126	11.06	0.0	-1-22
							_		
			1						
		1	·						-
$\overline{}$		+				The state of the s			
-									
			<u>i</u>		<u></u>		<u></u>		
l in				SAMPLING					
Date: 12 - 7				Time: 112	3				
Sample ID: 0	ML.	-MW-60	70	Method of San	ple Collection:	grab			
		sec pr							
		A -MB/MSD		Duplicate-Sam	ple_ID:				
Q.C. Parameter									
Frash picked up			Well locked?						
SIGNED/SAMPI		01	,						
		-//			.				

			477	pr.		ring Wel				
	MACH November	ΛαιιΙ	Linc			OMC Groundw				
	Well Number: Site:	OMC -	W105	Field Crew:			Purpose of Sam	pling:	OMC Qua	arterly Sampling
		0.0.0		Ticia Conditions	WELL CONDIT					
	Well Pad		Acceptable	Not Acceptable	Explain:					
	Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
	Well Casing		Acceptable	Not Acceptable	Explain:					
	Locking Cap		Acceptable	Not Acceptable	Explain:	need to	a			
	Well Label (ou	ıtside)	Accepted to	Not Acceptable	Explain:					
	Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
	J-Plug		Acceptable	Not Acceptable	Explain:	<u> </u>				
	Date: 2 2	12019	Time: 13	40	PURGE METH Method:	low-flow				
	Total Well Dep		= 108	· // -						
	Depth to Wate	r (ft):	= 5.7	5						
	Water Column	(ft):	= 5.1	14	0,8					
	Comments:		5,,,	ŧ	1 volume					
				****	OBSERVATIO	NS				
	Odor: (None , L	.ow , High	, H₂S , Fuel	Like , Other:					
	Comments:	\bigcirc								
					EI D D A D A D A D A D A D A D A D A D A					
		Volume	Rate		DO	ORP	Specific	Temp	Turbidity	Depth to water
	Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
3:40:05	12:11		240	7,79	14.65	52,3	0,996	1/2 1 01	<10 NTU	500
- •	3:45	 	240	7.74	13.86		20.	10.107		5.90
'		-						10,74		5.80
	3:50	 	240	7.67	13.82	52.3	0.989	10.38		5.80
	13:55		240	1102		54.2	0.983	10.49	1	5.80
	14:00	-	240	7.101	4	55.7	0.983	10.57	1	5.80
	14:05	1 1/	240	7.59	1	57.7	0.987			5.00
	14:10	V	240	7,58	13.57	59,3	0.989	10.54	0.0	5,80
	14:15	~3	SAM	PUED						
				=				<u> </u>		
		L			SAMPLING		1	1		
	Date: 2 2	312019			Time: 14:	15				
	Sample ID:			10 S	Method of Sam		grab			
							-			
	OC Cample T	woo: 1/ //	WI TUB	, Dissolve Duplicate	Dunling Sam	CS, MNF	+			
		, ,	•	Duplicate	Dupicate Samp	DIE IOS IN/+				
	Q.C. Parameter		_	Matellite at a long line of the	,					
	Trash picked up		t D_	Well locked?		l-				
	SIGNED/SAMP	'LER'	$-A^{0}$	DKN	race	<u>~</u>				
			VI	J						

				Monito	ring Well							
			Fiel	ld Data Sheet -	OMC Groundwate	er Site						
Well Number:	MW-	610D	Field Crew:	Ma		Purpose of Samp	oling:	OMC Qua	arterly Sampling			
Site:	OMC		Field Conditions:	40 F	Windy							
				WELL CONDIT			-					
Well Pad		Acceptable	Not Acceptable	Explain:								
Protective Cas	ing	Acceptable	Not Acceptable	Explain:								
Well Casing		Acceptable	Not Acceptable	Explain:								
Locking Cap		Acceptable	Not Acceptable	Explain:								
Well Label (ou	tside)	(Acceptable)	Not Acceptable	Explain: #	to (km)							
Well Label (ins	ide)	Acceptable -	Not Acceptable	Explain:								
J-Plug	ı	Asceptable	Not Acceptable	Explain:								
<u> (2)</u>	- / /			PURGE METH	OD							
Date:	12/3/19		U 1325	Method:	low-flow							
Total Well Dep	th (ft)	= 30.02	(K12)									
Depth to Water	r (ft):	= 5-6(1_	11-								
Water Column	(ft):	= 243	360	4.0								
Comments:				1 volume								
	\overline{A}			OBSERVATIO	NS							
Odor:	(None L	ow , High	, H₂S , Fuel	Like , Other:								
Comments:												
	<u></u>	<u> </u>	FII	ELD PARAMET	1	Specific	<u></u>					
Time	e Volume Rate (gal) (mL/min) pH (s		pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)			
		-	+/- 0.1 s.u.	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU				
1330	250	250	7.25	0.61	74.3	1.292	11-75	4.7	5.80			
1335		250	7124	0.58	66.3	1287	11173	4.6	5.92			
1340		250	7.20	0.43	8.0	1287	11.63	1.4	5.92			
1345		257)	7.20	0,34	-23.3	1.276	11.48	11	5.92			
1350		250	7.20	0.30	-39.9	1276	11.47		5-92			
		250	7.20	 			41.0					
1355	-			0.30	-41.3	1-276			5.92			
1400	N3	250	7.20	0.30	-436	[-275	11.18	1.6	5-92			
	S	ample	l@ 140	2								
		<u> </u>										
				- 11								
			-									
	l	<u> </u>										
D-1 /	1.0			SAMPLING								
Date: (2/3	,			Time: 1405	ס							
Sample ID: 0 f				Method of Sam		grab						
Analytical Para	meters: VO	C, POB.	Dissolved	Melal	MNA							
Q.C. Sample Ty	/pe: Ν/Δ	MS/MSD	Dissolved	Duplicate Sam	ple ID: N/A							
Q.C. Parameter					**							
Trash picked up		v	Well locked?	· -								
SIGNED/SAMP		1	4									
C.O. IED/QAME		1	- fl									
			-									

				Monito	ring Well				
			Fiel	ld Data Sheet -	OMC Groundwate	er Site			
Well Number.	MW-	6125	Field Crew:	CHEN	v	Purpose of Samp	ling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:	30 F	Overions	- Will	4		
Marin De d				WELL CONDIT	ION				<u> </u>
Well Pad	1	Acceptable	Not Acceptable	Explain:					
Protective Cas	ing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (out		Accentable	Not Acceptable	Explain:					
Well Label (ins	ide) (Accentable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:	00				
Date: 12/6	110	Time: 09		PURGE METH Method:	low-flow				
Total Well Dep									
Depth to Water	r (ft):	= 10.7	•						
Water Column		= 7:09		1.15					
	. ,	7.0	o .	1 volume					
Comments:									
				OBSERVATIO	NS				
Odor:	None L	ow , High		Like , Other:					
Comments:	9		-						
			FI	ELD PARAME1	TERS				
Time	Volume	Rate (mL/min)	pH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity	Depth to water
	(gal) 	(IIIC/IIIII) 	+/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
0925	1	450	7.64	5.01	-67.6	1.109	7.44	163	3.73
0930		450	7.26	0.90	-86.7	1.118	7.46	30.4	3.77
0935		450	7.12	0.43	-110.3	1114	7.44	45.3	3.74
210			-			1.104	7.73		- 7/4
6940		4)8	708	0.27	-110.5			20.7	3.73
6745	/	450			-1155	1.103	780	9.Z	374
0950	V	450	7-06	0.15	-1172	1.100	7.77	7.0	3.74
0955	N4	450	7.06	0.13	-115.4	1.100	7.96	2.4	3.74
1000	S1	AMP	CE						
•		1							
								-	
						<u> </u>			
			<u>.</u>						
1 -	. 1 0		•	SAMPLING					
Date: 12 6	5114			Time: /00	0				
Sample ID: ()	MC-M	W-612S	Δ.	Method of Sam	ple Collection:	grab			
Analytical Paran	meters: U (CSINN	the Diss	Mt.					
Q.C. Sample Ty		MS/MSD	Duplicate	Duplicate Samo	ole ID: // j/// /	-MW-61	25-R	-0	1005
Q.C. Parameter			D.55 M	at	price	5000			-
Trash picked up				<u>uc'</u>		<u></u>			
SIGNED/SAMPI	'		Well looked?						
JIGNEU/JAMPI	LGM.	(r/		• .	=			
		~ /							
		1							
	THE RESERVE OF THE PERSON NAMED IN	managed Loutman between	To a second contract of the second contract o					and the second	



	Monitoring Well Field Data Sheet - OMC Groundwater Site												
		-4 4					er Site						
	Well Number:	MM-6	2819	Field Crew: L.		1870	Purpose of Samp	oling:	OMC Qua	rterly Sampling			
	Site:	ОМС		Field Conditions:	WELL CONDIT		F			_			
	Well Pad		Acceptable	Not Acceptable	Explain			ادارد آد	100				
	Protective Cas	sing	Acceptable	Not Acceptable	Explain:	Mudo	ly curour	ia Mai	1/300	X			
	Well Casing		Acceptable	Not Acceptable	Explain:								
	Locking Cap		Acceptable	Not Acceptable	Explain:								
	Well Label (ou	tside)	Acceptable	Not Acceptable	Explain:								
	Well Label (ins	side)	Acceptable	Not Acceptable	Explain:								
	J-Plug		Acceptable	Not Acceptable	Explain			<u></u>					
	Date:		Time: J. J		PURGE METH Method:	low-flow	-						
	Total Well Dep	oth (ft)	Time: / 4 = 10.9(! 30 0	wethou.	104-1104							
	Depth to Wate	r (ft):	= 3.72										
	Water Column	(ft):	7.24		1.2								
	Comments:				1 volume								
				w/	OBSERVATIO	NS							
	Odor:	None ,	Low). High	, H/S Fuel	Like , Other:								
	Comments			e Lla									
				FI	ELD PARAME	TERS	lo is						
	Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)			
14:33	2.200	<u> </u>	210	+/- 0.1 s,u,	Co. 46	230.8	1.021	8.09	12.6	5,02			
-	2:200	1	210	7.71	491	232.5	.1	7 20	5.0	5.02			
14:38	14:42		200	701	11/20	232.8	1,020	7.57		4,68			
	11.10] ""	7.71	4,82		<u> </u>	1,130	2.1	4 211			
	14:48		210	7.73	4.93	232.8	1.017	7.48		1,07			
	14.53	N3	220	+,76	311+	232.8	1,011	7.38		5.22			
	14:50	NJ	220	7.74	4.91	636,9	1.008	7.58	0,0	5,22			
	15:03		SAMA	60									
								-					
								¥					
					SAMPLING								
	Date: [2]	5119			Time: 5;	03							
			MW-Cel	25	Method of Sam	ple Collection	grab						
	Analytical Para	meters: \	ince Ma	etals, 1	MALA								
	Q.C. Sample Ty					ple ID: N/V							
	Q.C. Parameter					4 - 4							
	Trash picked up			Well locked? V			<u> </u>						
	SIGNED/SAMP	ŧ	Dan	Well locked? Y	els.								

•			Fiel		oring Well - OMC Groundwate	es Cito				_
Well Number:	Mil.	-613D		Ma	- OMC Gloundwate	Purpose of Sam	pling:	OMC Qua	arterly Sampling	_
Site	OMC	WOD	Field Conditions:	_ `	indy	,			W	
				WELL CONDI	TION				,	_
Well Pad		Acceptable	Not Acceptable	Explain:	overgrown	regetat	on a	nund	rest	
Protective Cas	sing	Acceptable	Not Acceptable	Explain:	17					
Well Casing		cceptable	Not Acceptable	Explain:						
Locking Cap		Agceptable	Not Acceptable	Explain:						
Well Label (out	•	Acceptable	Not Acceptable	Explain:						
Well Label (ins	ilde)	Acceptable	Not Acceptable	Explain:						
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METI	HOD					
Date: 12/5/	/19	Time: 42	50	Method:	low-flow					_
Total Well Dep	th (ft)		5-81							
Depth to Water	r (ft):	=454	45 (W)	2-110						
Water Column	(ft):	=	1.36	3,48						
Comments:		۷) I 3 U	1 volume						
										_
Odor:	None	Low , High		OBSERVATION						_
	- 3		- %	Like , Other		۸ د	1.		1.	
Comments	Jiigh-	riy black	C W/ ShS	pendear	black y	orticle:	S. ligh	nt sn	een ob s clos	?1/12/16/ ch 1 Scrud
	1		FI	ELD PARAME	TERS	Specific			T-	_
Time	Volume (gal)	Rate (mL/min)	pH (s.u.) +/- 0.1 s,u,	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Conductance (mS/cmc)	Temp (°C) I+/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)	
1435	1	300	718	0.24	-207-1)	2.540	11.98	4.9	5.50	_
1440		250	723	0.18	-749.5	2.529	11.81	1.4	5.50	-
1445		150	7-25	016	- 258.9	2.570	11.84	1.4	5.50	_
1450		250	7.27	0.18	-258.5	2.507	11.85	O	5.50	-
1455		300	7.28	016	-261.1	2.506	11.87	O	5.50	-
1500	 ,	300		0.15	-264.8	2500	1190	0		-
HT 1505		300	7.29		1	2.494	1	0	5.50	-
	NU		730	0,14	-268.4		11.95	 	5.50 5.50	⊷
1570	-	500	7 30	0.14	-2709	2.506	11.95	0	15.50	-
		Sample	10	1515				1		-
					_					_
						, 				_
										_
				SAMPLING						- -
Date: 12/2	5/19			Time: 1519	,					
Sample ID:	MC-1	NW-613	D	Method of Sa	mple Collection:	grab				
			, MAA, di	isolipl	metals	r.24	1 1/	1,		
Q.C. Sample Ty	ype: N	MS/MSD	Duplicate	Duplicate San	nple ID(IA	46	= 2.5	vg/L	-	
Q.C. Parameter	•				MI,			_		
Trash picked up		<u>'</u>	Well locked?							-
SIGNED/SAMP	LER:	(7							
			V							•
			,							

			Fie	ld Data Sheet -	OMC Groundwate	r Site			
Well Number: Site:	ОМС	J-6145	Field Crew: L	SCHAGE SUNNY WELL CONDIT	27·F	Purpose of Samp	oling;	OMC Qua	rterly Sampling
Well Pad		Acceptable	Not Acceptable	Explain:				•	
Protective Casi	ing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (out	tside)	Acaeptable	Not Acceptable	Explain:					
Well Label (insi	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
				PURGE METH					
Date:	4b. 40°	Time: 7 ::	35	Method:	low-flow				
Total Well Depl Depth to Water	• •	= 3.33							
		J. 5 0	`	10					
Nater Column	(ii).	= 7.40	1	1.2					
Comments:				1 volume					
\	None CLO	. L6) . High	_	OBSERVATION Like , Other:	NS				
			N WATER	Like , Other:					
Odor; Comments: (uoy Brow	N WATER	Like , Other:		Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
Comments:	CLO	UDY BROW	N WATER	Like , Other: LELD PARAMET DO (mg/L)	TERS ORP (mV)	Conductance (mS/cmc)	(°C)		
Comments:	CLO	UDY BROW	N WATER	Like , Other: DO (mg/L) +/- 10%	TERS ORP (mV)	Conductance (mS/cmc) +/- 3%	(°C) +/- 3% -/- 3/6	(NTU) <10 NTU	(feet)
Comments:	CLO	e Rate (mL/min)	N WATER	Like , Other: DO (mg/L) +/- 10%	TERS ORP (mV)	Conductance (mS/cmc) +/- 3%	7.3%	(NTU) <10 NTU	(feet)
7:40 7:45	CLO	uoy Brown Rate (mL/min)	PH (s.u.) +1-0.1 s.u. 7.35 7.22	ELD PARAMET DO (mg/L) +/-10% Z.35 1.70	ORP (mV) 4-10 mV 228, 1 224, 9	Conductance (mS/cmc) +/-3% 0.923 0.907 0.780	(°C) 4-3% 7-31 9,35 8,68	(NTU) <10 NTU 85,5 59,2 24.8	3.51 3.51 3.51
7:40 7:45 7:50	CLO	Rate (mL/min)	PH (s.u.) +/-0.1 s.u. 7.35 7.27 7.22	ELD PARAMET DO (mg/L) +/- 10% Z.35 1.70 0.108	ORP (mV) 4-10 mV 228, 1 224, 9 224, 1	Conductance (mS/cmc) +/-3% 0.923 0.807 0.780	7 31 9,35 8,44	(NTU) <10 NTU 85.5 59.2 24.8 12.4	3.51 3.51 3.51 3.51
7:40 7:45 7:50 7:55	CLO	Rate (mL/min) 240 240 240 320	N WATER PH (s.u.) +7.01s.u. 7.35 7.27 7.22 7.19	DO (mg/L) +/- 10% Z.35 I.70 U.35	ORP (mV) 4-10 mV 228, 1 224, 9 124, 5 124, 8	Conductance (mS/cmc) +/-3% 0:023 0.807 0.780 0.747 0.765	60 4.3% 7 31 8.35 8.68 8.14 8.96	(NTU) <10 NTU 85.5 59.2 24.8 12.4 9.2	3.51 3.51 3.51 3.51 3.53
7:40 7:45 7:50 7:55 8:00	CLO	Rate (mL/min)	PH (su) +1-01su 7.35 7.22 7.22 7.18 7.19 7.17	DO (mg/L) +/-10% Z.35 1.70 ().78 0.108 0.35	1223. L 223. L 224.9 224.5 224.5 226.7	Conductance (mS/cmc) +/-3% 0.807 0.780 0.777 0.760 0.758	60 -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.3% -1.0%	(NTU) 410 NTU 85.5 59.2 24.8 12.4 9.2 9.9	3.51 3.51 3.51 3.51 3.53 3.53
7:40 7:45 7:50 7:55 8:00 8:05	CLO	Rate (mL/min)	N WATER PH (su) 1-01su 7.35 7.22 7.12 7.18 7.19 7.19 7.11	DO (mg/L) +10% 2.35 1.70 (J.78) 0.108 0.35 0.35	ORP (mV) +1-10 mV 228, L 224, 9 226, 7 226, 6	Conductance (mS/cmc) +/-3% 0:923 0.807 0.780 0.777 0.765 0.753	60 4.3% 7.31 8.35 8.68 8.94 8.96 9.13 9.29	(NTU) \$10 NTU \$5,5 \$9,2 24.8 12.4 9,2 9,9 7,7	3.51 3.51 3.51 3.51 3.53 3.53 3.53
7:40 7:45 7:50 7:50 8:00 8:05	CLO	Rate (mL/min)	PH (su) 1-01su 1-35 1-22 1-12 1-18 1-19 1-17 1-16 1-16	DO (mg/L) +/- 10% 2.35 1.70 0.28 0.28	TERS ORP (mV) +1-10 mV 228. 224.9 226.7 226.6 226.6	Conductance (mS/cmc) +/-3% 0.023 0.807 0.780 0.777 0.765 0.758 0.757 0.747	8.35 8.35 8.44 8.96 9.13 9.29 9.46	(NTU) 	3.51 3.51 3.51 3.53 3.53 3.53 3.53
7:40 7:45 7:55 8:00 8:05 8:10	Volume (gal)	Rate (mL/min)	PH (su) +7.01su 7.35 7.22 7.12 7.19 7.19 7.10 7.10 7.17	DO (mg/L) +/-10% Z.35 1.70 0.78 0.108 0.35 0.31 0.29 0.28	1226.6 226.3	Conductance (mS/cmc) +/-3% 0.807 0.780 0.777 0.765 0.758 0.757 0.757 0.747 0.742	9,35 8,95 8,94 8,96 9,13 9,29 9,76 9,76	(NTU) 10 NTU 85.5 59.2 24.8 12.4 9.2 9.9 7.7 8.0 5.1	3.51 3.51 3.51 3.53 3.53 3.53 3.53 3.53
7:40 7:45 7:50 7:55 8:00 8:05 8:10 8:15 8:20 8:25	Volume (gal)	Rate (mL/min)	PH (su) 4.01su 7.35 7.22 7.18 7.19 7.10 7.10 7.15	DO (mg/L) +10% 2.35 1.70 ().78 0.108 0.35 0.35 0.31 0.29 0.28 0.25	CRP (mV) 228. L 224.5 124.5 124.5 226.6 226.3 226.0	Conductance (m5/cmc) +1-3% 0.807 0.780 0.777 0.758 0.758 0.758 0.757 0.747 0.742 0.747	9.35 8.35 8.44 8.96 9.13 9.29 9.46 9.72 9.95	(NTU) \$10 NTU 85.5 59.2 24.8 12.4 9.2 9.9 7.7 8.0 5.1 3.6	3.51 3.51 3.51 3.53 3.53 3.53 3.53 3.53
7:40 7:45 7:55 8:00 8:05 8:10	Volume (gal)	Rate (mL/min)	PH (su) +101 su 7.35 7.22 7.12 7.19 7.19 7.10 7.15 7.16	DO (mg/L) +/-10% Z.35 1.70 0.78 0.108 0.35 0.31 0.29 0.28	1226.6 226.3	Conductance (mS/cmc) +/-3% 0.807 0.780 0.777 0.765 0.758 0.757 0.757 0.747 0.742	9.35 8.35 8.44 8.96 9.13 9.29 9.46 9.72 9.95	(NTU) \$10 NTU 85.5 59.2 24.8 12.4 9.2 9.9 7.7 8.0 5.1 3.6	3.51 3.51 3.51 3.53 3.53 3.53 3.53 3.53

Date: 12/5/2019 Time: 8!35Sample ID: 0MC - MW - U14S Method of Sample Collection: grab
Analytical Parameters: VOCs, Metals, MNAQ.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sample ID: N/A

Q.C. Parameters: N/A

Trash picked up?

Well locked? X

			Fi	eld Data Sheet	 OMC Groundwate 	er Site			
Well Number.	MW-6	,140	Field Crew; (ma		Purpose of Sam	pling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions	s 34 F S	Sunny				
-				WELL CONDI	TION				· .
Well Pad		Acceptable	Not Acceptable	Explain					
Protective Ca	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain					
Locking Cap		Acceptable	Not Acceptable	Explain		X.			
Well Label (or		Actemable	Not Acceptable		Not labele	#			
Well Label (in:	side)	cceptable	Not Acceptable	Explain					
J-Plug		Acceptable) Not Acceptable	Explain:	IOD				
Date: 12/4	1/19	Time: 07		Method:	low-flow				
Fotal Well De	•	= 29.7							
Depth to Wate	er (ft):	= 3.34							
Nater Column	ı (ft):	= 26.	44	4.3					
Comments:		•		1 volume					
	91 i .	w . High		OBSERVATION OTHER		hade t	7-4	-	
	None . Lo Slightly		V, bubble	Like , Other:	d in puze	bucket	70 6-0-00		
- 10	Slightly Volume	Yellov	V, bubble	Like , Others S Ob Service FIELD PARAME	d in pwge Ters	Specific	Temp	Turbidity	Depth to water
	slightly	yellow	V / bubble	I Like , Others S Ob Sevel FIELD PARAME DO (mg/L)	TERS ORP	Specific Conductance (mS/cmc)	(°C)	(NTU)	Depth to water (feet)
Comments:	Slightly Volume	Rate (mL/min)	√ , bubble F pH (s.u.) +/- 0.1 s.u,	Like , Others S Ob Service FIELD PARAME	TERS ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
Comments: (Slightly Volume	Rate (mL/min)	V, bubble F PH (s.u.) +7-0.1 s.u. 7-78	I Like , Others S Observed FIELD PARAME DO (mg/L) +/- 10% 2 . 17	d in pwse TERS ORP (mv) +/- 10 mv 167.10	Specific (Conductance (mS/cmc) +/- 3%	(°C) +/-3%	(NTU) <10 NTU 3.5	(feet) 8.12
Comments: 5	Slightly Volume	Rate (mL/min)	V, bubble ph (s.u.) 7.78 1.83	I Like Others S Observed FIELD PARAME DO (mg/L) +/- 10% 2.17	d in pwse TERS ORP (mv) +/- 10 mv 167.6 82.1	Specific Conductance (mS/cmc) +/- 3% 4 - [3Co A , 228	10,21 10,87	(NTU) <10 NTU 3.5 2.6	(feet) 812
0740 0745	Slightly Volume	Rate (mL/min) 225 225	J, bubble pH (s.u.) 7.78 1.83 1.85	I Like , Others 25 06 2000 FIELD PARAME DO (mg/L) +/- 10% 2 - 17 1 - 85	d 19 pwse TERS ORP (mv) +/- 10 mv 167.6 82.1 35.0	Specific Conductance (ms/cmc) +/- 3% 4 · [3Co 4 , 228]	10,21 10,87 10,73	3.5 2.6 40	(reet) 8-12 (0-78
0740 0745 0750	Slightly Volume	Yellov Rate (mL/min) 225 200 200	J, bubble pH (s.u.) -7.21 s.u. 1.83 1.85 1.85	ILIKE , Others 25 00 2000 FIELD PARAME DO (mg/L) +/- 10% 2 - 17 1 - 85 1 - 74 1 - 59	d 19 pwgs TERS ORP (mv) +/- 10 mv 167.6 82.1 35.0 -19.5	Specific Conductance (mS/cmc) +1-3% 4 - 13Co 4 - 228 4 - 287 4 - 375	10.21 10.87 10.28	(NTU) <10 NTU 3.5 2.6 40 3.5	8-12 10-78 10-91
0740 0745 0750 0755 0800	Slightly Volume	Yellov Rate (mL/min) 225 225 200 200 200	7, bubble pH (s.u.) 7.78 7.83 7.85 7.89 7.94	ILIKE , Others 25 06 Sevel FIELD PARAME DO (mg/L) +/- 10% 2.17 1.85 1.74 1.59	DRP (mv) +/- 10 mv -/- 10 mv	Specific (Conductance (mS/cmc) +1-3% 4 · [36	10.21 10.87 10.28 10.28 10.28	3.5 2.6 40 3.5 4.5	(ree)
0740 0745 0750 0753 0800 0805	Slightly Volume	Rate (mL/min)	7, bubble ph (s.u.) 778 783 785 789 794 795	ILIKE , Others 25 06 2008 FIELD PARAME DO (mg/L) +/- 10% 2 - 17 1 - 85 1 - 74 1 - 59 1 - 48	d 19 pwse TERS ORP (mv) +/- 10 mv 167.6 82.1 35.0 -19.5 -53.1 -68.1	Specific Conductance (ms/cmc) +1-3% 4 · [3Co 4 · 228 4 · 287 4 · 375 4 · 518 4 · 642	10.21 10.87 10.28 10.28 10.28 10.23	3.5 2.6 40 3.5 4.5 5.1	10.78 10.9 11.62 12.50 12.75
0740 0745 0750 0755 0800 0805	Slightly Volume	Yellov Rate (mL/min) 225 200 200 200 200 200	J, bubble ph (s.u.) 7.78 1.83 1.85 1.85 1.89 7.94 7.95 8.07	ILIKE , Others 25 06 Sevel FIELD PARAME DO (mg/L) +/- 10% 2.17 1.85 1.74 1.59 1.48	d 19 pwgs TERS ORP (mv) +/- 10 mv 167.6 82.1 35.0 -19.5 -53.1 -68.1 715.5	Specific Conductance (ms/cmc) +1-3% 4 · 13Co 4 · 287 4 · 375 4 · 518 4 · 518 4 · 4.776	10.21 10.87 10.28 10.28 10.28 10.23 10.80	3.5 2.6 40 3.5 4.5 5.1 9.3	10.78 10.78 10.91 11.62 12.50 12.75
0740 0745 0750 0755 0800 0805 0810	Volume (gal)	Yellov Rate (mL/min) 225 200 200 200 200 200	7, bubble ph (s.u.) 7.78 7.83 7.85 7.89 7.94 7.95 8.07	ILIKE , Others 25 06 Sevel FIELD PARAME DO (mgA) +1-10% 2.17 1.85 1.74 1.59 1.48 1.18	d in pwse TERS ORP (mv) +/- 10 mv 167.6 82.1 35.0 -19.5 -53.1 -68.1 715.5 -114.0	Specific Conductance (mS/cmc) 4.136 4.287 4.287 4.375 4.518 4.642 4.776 4.776	10.21 10.21 10.87 10.28 10.28 10.23 10.80 11.56	3.5 2.6 40 3.5 4.5 5.1 9.3 4.7	10.78 10.78 10.91 11.62 12.50 12.75 15.93
0740 0745 0750 0755 0800 0805 0810 0815 0820	Volume (gal)	Rate (mL/min) 225 200 200 200 200 200 200	7, bubble ph (s.u.) 778 783 785 789 794 794 795 807 807	ILIKE , Others 25 06 Sevel FIELD PARAME DO (mg/L) +/- 10% 2.17 1.85 1.74 1.59 1.48 1.18 1.10	DRP (mv) +10 mv (67.6) 82.1 35.0 -19.5 -53.1 -68.1 -15.5 -114.0 -110.9	Specific Conductance (ms/cmc) +1.3% 4.13% 4.287 4.375 4.518 4.42 4.77% 4.797 4.797	10.21 10.21 10.87 10.28 10.28 10.23 10.80 11.56 11.49 11.45	3.5 2.6 40 3.5 5.1 9.3 4.7 4.3	10.78 10.91 11.62 12.50 12.75 15.93 15.93
0740 0745 0750 0755 0800 0805 0810	Volume (gal)	Yellov Rate (mL/min) 225 200 200 200 200 200	7, bubble ph (s.u.) 7.78 7.83 7.85 7.94 7.95 8.07 8.09 8.09 8.09	ILIKE , Others 25 065244 FIELD PARAME DO (mgA.) +1-10% 2-17 1-85 1-74 1-50 1-48 1-18 1-10 1-10	d in pwse TERS ORP (mv) +/- 10 mv 167.6 82.1 35.0 -19.5 -53.1 -68.1 715.5 -114.0	Specific Conductance (mS/cmc) 4.136 4.287 4.287 4.375 4.518 4.642 4.776 4.776	10.21 10.21 10.87 10.28 10.28 10.23 10.80 11.56	3.5 2.6 40 3.5 4.5 5.1 9.3 4.7	10.78 10.78 10.91 11.62 12.50 12.75 15.93
0740 0745 0750 0755 0800 0805 0810 0815	Volume (gal)	Rate (mL/min) 225 200 200 200 200 200 200	7, bubble PH (su) 778 788 788 789 794 794 795 807 807 809 809	ILIKE , Others 25 065244 FIELD PARAME DO (mgA.) +1-10% 2-17 1-85 1-74 1-50 1-48 1-18 1-10 1-10	DRP (mv) +10 mv (67.6) 82.1 35.0 -19.5 -53.1 -68.1 -15.5 -114.0 -110.9	Specific Conductance (ms/cmc) +1.3% 4.13% 4.287 4.375 4.518 4.42 4.77% 4.797 4.797	10.21 10.21 10.87 10.28 10.28 10.23 10.80 11.56 11.49 11.45	3.5 2.6 40 3.5 5.1 9.3 4.7 4.3	10.78 10.91 11.62 12.50 12.75 15.93 15.93
0740 0745 0750 0755 0800 0805 0810 0815	Volume (gal)	Yellov Rate (mL/min)	7, bubble ph (s.u.) 7.78 7.83 7.85 7.94 7.95 8.07 8.09 8.09 8.09	ILIKE , Others 25 065244 FIELD PARAME DO (mgA.) +1-10% 2-17 1-85 1-74 1-50 1-48 1-18 1-10 1-10	DRP (mv) +10 mv (67.6) 82.1 35.0 -19.5 -53.1 -68.1 -15.5 -114.0 -110.9	Specific Conductance (ms/cmc) +1.3% 4.13% 4.287 4.375 4.518 4.42 4.77% 4.797 4.797	10.21 10.21 10.87 10.28 10.28 10.23 10.80 11.56 11.49 11.45	3.5 2.6 40 3.5 5.1 9.3 4.7 4.3	10.78 10.91 11.62 12.50 12.75 15.93 15.93

Sample ID: 0M C -MW- 614D

Method of Sample Collection:

Analytical Parameters: VII, dissolved metals, MNA

Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate Sa

Q.C. Sample Type:

Duplicate Duplicate Sample ID: N

Q.C. Parameters:

Trash picked up?

Well locked?

SIGNED/SAMPLER:



V ==:		 :	Fiel		ring Well	er Site			
Well Number:	Mu)-	6155		SCHAR		Purpose of Samp	olina:	OMC Qua	rterly Sampling
Site:	OMC	Ψ.5 5	Field Conditions:	•	100	42°F	-		, , , , ,
		79	1	WELL CONDIT	ION	1 10 1			
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	ing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain					
Locking Cap	national N	Acceptable	Not Acceptable	Explain:					
Well Label (out Well Label (ins		Acceptable Acceptable	Not Acceptable Not Acceptable	Explain: Explain:					
J-Plug	idey	Acceptable	Not Acceptable	Explain:					
			•	PURGE METH	OD				
Date: 2/4 Total Well Dep		Time:		Method:	low-flow				
Depth to Water		= 4.79	l						
Water Column		= 0.0	1	1.1					
Comments:		W · C		1 volume					
		<i>1</i>		OBSERVATIO	NS				
Odor:	None , K	,		Like , Other:					
			E/BROWN				,		
ORAN)GE/B	BONN 1		CIRDUN D		- CLOUDY			
F!	Volume	Rate		DO	ORP	Specific	Temp	Turbidity	Depth to water
Time	(gal)	(mL/min)	pH (s.u.) +/- 0.1 s,u,	(mg/L) +/- 10%	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
4.27	,	400	7.50	1 17	4/- 10 mV	6-21	9,18	1233	489
4:42		200	725	0.93	96.3	101771	9,13	135.5	4.39
14:47		200	7.30	0.84	94.3	12-90	9.74	47.2	4,39
14.57		200	7,26	0.75	93,7	0.586	9,31	349	409
14:57		200	7.22	0.80	91.5	G 590	9,47	11.2	4,89
15:02		240	7.21	Oilele	89.7	0.596	9,08	42	4 29
5:07		240	7.20	0.57	87,5	0.594	9.41	1.7	4,89
15:12		240	7.10	0.52	2610	0.595	9,00	1,8	4.89
15:17		240	7113	0.47	85,3	0,592	8.99	1.6	4.89
5:22		240	7.18	0.42	34.2	A -02	9.22	0,6	4.89
15:27	V	240	7,18	0.41	93,7	0,572	9.12	M 3	400
15:32	-5001	241)	7/10	(),39	82.4	DC3/2	9.15	\(\frac{1}{2} \)	U 130
15.37		AMPUE	0	SAMPLING	0014	10.516	1110		7.01
1	14120		· ·	Time: / 5	32				<u></u>
	•			Method of Sam	_	grab			
(nalytical Parar	neters:	nw-61	k MNA,			-			
Q.C. Sample Ty		MS/MSD	Duplicate	Duplicate Samp	ole ID N/A	•			
2.C. Parameter			- Abreades	- aparente warm					
rash picked up		Λ	Well locked?						
SIGNED/SAMP	7	(d)n	of Vill	arch					
	,	70	w all	Ph 1/	/				

			Fiel	Monito d Data Sheet -	OMC Groundwate	er Site			
Well Number:	Mw-	615D	Field Crew: 1/	L Ma		Purpose of Sampling:		OMC Quarterly Sampling	
Site:	OMC		Field Conditions:		Windy				
			1	WELL CONDIT	ION				
Well Pad		Acceptable	Not Acceptable	Explain					
Protective Cas	sing	Acceptable	Not Acceptable	Explain:			1 6	2	
Well Casing		Acceptable	Not Acceptable	Exptain:		199	lofi		
Locking Cap		Adceptable	Not Acceptable	Explain					
Well Label (ou	•	Acceptable	Not Acceptable	Explain:					
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	OD				
Date: して/L	1/19	Time: [/-	7 -	Method:	low-flow				
Total Well Dep	* /	= 27.	41						
Depth to Wate	er (ft):	= 432							
Water Column	(ft):	= 12.5	9	3.8					
Comments:		6	, ,	1 volume					
				OBSERVATIO	NS			,	
Odor:		Low , High	, H ₂ S , Fuel	Like , Other:			<u>. </u>		
			, H ₂ S , Fuel	Like , Other:	ns pserved in	purge bui	cket		
			. H2S. Fuel	Like , Other:	served in	purge bu	cket		
Odor: Comments:	Sligh	tly yellow	. H2S. Fuel	Wa-k Other:	rse v/eil in	PWGL by I	Temp	Turbidity	Depth to water
Comments:	sligh	tly yellow	. H ₂ S . Fuel / bubbly FI	Like , Other: Wake 0	psev/eil in	Specific		Turbidity (NTU)	Depth to water (feet)
Comments:	Sligh	tly yellow	H ₂ S , Fuel , bubbly FI ph (s.u.)	ELD PARAME DO (mg/L)	PSEV/Cil 1/1 TERS ORP	Specific Conductance (mS/cmc)	Temp (°C)	(NTU)	
Comments:	Sligh	Rate (mL/min)	H ₂ S , Fuel , bubbly FI pH (s.u.)	ELD PARAME DO (mg/L)	PSEVI/CIL IM FERS ORP (mV) +1- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	(NTU) <10 NTU	
Time 1435	Sligh	Rate (mL/min) 300 300	FI pH (s.u.) 4-6-6-6	ELD PARAME DO (mg/L) +/- 10% 2. 4	ORP (mv) +1-10 mv -184	Specific Conductance (mS/cmc) */- 3%	Temp (°C) +4-3% 12.04	(NTU) <10 NTU 0	
Time 1435 1440 1445	Sligh	Rate (mL/min) = 300 300	FI pH (s.u.)	ELD PARAME DO (mg/L) +/- 10% 2. 41 1.00	ORP (mV) +10 mV -18 4 -89 0 -106 7	Specific Conductance (mS/cmc) +1-3% 2.53 (0 3.013 3.074	Temp (°C) +1-3% 12.04 12.45	(NTU) <10 NTU O J.5	573 5.82 5.93
Time 1435 1440 1445 1450	Sligh	Rate (mL/min) 300 300 300 300	FI (s.u.) +4-0.1 s.u. 9 - 66 0 9 - 64	ELD PARAME DO (mg/L) +/- 10% 2. 41 1.00 [.0]	ORP (mV) -184 -890 0 -132.4	Specific Conductance (mS/cmc) */-3% 2-530 3-013 3-074 3-111	Temp (°C) +4.3% 12.04 12.45 12.35	(NTU) <10 NTU 0 1.5 (Q.4 3.5	573 5.82 5.73 5.73
Time 1435 1440 1450 1450 1455	Sligh	Rate (mL/min) 300 300 300 300 300	FI (s.u.) +-0.1 s.u. 9-66 9.60 9.64	ELD PARAME DO (mg/L) +/- 10% 2. 4 1.00 [.0] 0.97 0.94	ORP (mV) -184 -890 -1324 -1544	Specific Conductance (mS/cmc) +/- 3% 2.53 (0 3.013 3.074 3.111 3.127	Temp (c) +/-3% 12.04 12.45 12.31 12.21	(NTU) <10 NTU 0 1.5 (0.4 3.5 1.8	5.73 5.82 5.73 5.73 5.73
Time 1435 1440 1445 1450 1455 1500	Sligh	Rate (mL/min) = 300 300 300 300 300 300	FI (s.u.)	ELD PARAME DO (mg/L) +/- 10% 2. 41 100 [.0] 0.97 0.97	ORP (mV) -184 -890 -1067 -132.4 -1544 -246.2	Specific Conductance (mS/cmc) +/-3% 2.53 (0 3.013 3.074 3.111 3.127 3.148	Temp (co) +4.3% 12.04 12.45 12.35 12.21 12.27	(NTU) (10 NTU 0 1.5 (Q.4 3.5 1.8	5.73 5.82 5.73 5.73 5.73
Time 1435 1440 1445 1450 1455 1500	Sligh	Rate (mL/min) 300 300 300 300 300 300 300 300 300	FI (s.u.)	DO (mg/L) +/- 10% 2. 41 1.00 [.0] 0.97 0.94 0.85	ORP (mV) -184 -890 -1067 -132.4 -154.4 -246.2 -280.3	Specific Conductance (mS/cmc) +1.3% 2.53 (0 3.013 3.074 3.111 3.127 3.148 3.163	Temp (°C) +1.3% 12.04 12.45 12.35 12.21 12.25 12.11	(NTU) -10 NTU 0 1.5 (0.4 3.5 1.8 1.0 8.3	5.73 5.82 5.73 5.73 5.73 5.73
Time 1435 1440 1445 1450 1450 1500 1505	Sligh	Rate (mL/min) - 300 300 300 300 275	FII PH (s.u.) +7.0.1 s.u. 9.66 9.66 9.68 9.68	ELD PARAME DO (mg/L) 1-10% 2. 41 1-00 [.0] 0.97 0.94 0.85 0.84 0.84	ORP (my) -184 -890 -1067 -132.4 -154.4 -246.2 -290.3 -290.8	Specific Conductance (ms/cmc) +/-3% 2.53 (0 3.013 3.074 3.111 3.127 3.148 3.163 3.184	Temp (c) +/.3% 12.04 12.45 12.37 12.27 12.27 12.25 12.11	(NTU) (10 NTU 0 1.5 (0.4 3.5 1.8 1.0 8.3 1.3	5.73 5.82 5.73 5.73 5.73 5.73
Time 1435 1440 1445 1450 1455 1500 1505 1515	Sligh	Rate (mL/min) = 300 300 300 300 300 275 275	FI (s.u.)	ELD PARAME DO (mg/L) +/- 10% 2. 41 100 1.01 0.97 0.97 0.85 0.84 0.84 0.77	Served in TERS ORP (my) -184 -890 -1067 -132.4 -1544 -246.2 -280.3 -2869	Specific Conductance (mS/cmc) +1-3% 2-536 3.013 3.074 3.111 3.127 3.148 3.163 3.184 3.199	Temp (c) +1-3% 12.04 12.45 12.37 12.27 12.27 12.25 12.11	(NTU) (10 NTU) (10 NTU)	5.73 5.73 5.73 5.73 5.73 5.73 5.73 5.73
1435 1440 1445 1450 1450 1500 1505	Sligh	Rate (mL/min) 300 300 300 300 300 300 300 3	PH (s.u.)	ELD PARAME DO (mg/L) 1-10% 2.41 1-00 1.01 0.97 0.97 0.94 0.85 0.84 0.77 0.77	ORP (my) +1-10 mV -184 -890 -1067 -132.4 -154.4 -246.2 -280.3 -280.9 -230.2	Specific Conductance (mS/cmc) +/-3% 2.536 3.013 3.074 3.111 3.127 3.148 3.163 3.184 3.199 3.200	Temp (c) +/.3% 12.04 12.45 12.37 12.27 12.27 12.25 12.11	(NTU) -10 NTU 0 1.5 (2.4 3.5 1.8 1.0 8.3 1.3 1.3	5.73 5.82 5.73 5.73 5.73 5.73 5.73 5.73 5.38
Time 1435 1440 1445 1450 1455 1500 1505 1515	Sligh	Rate (mL/min) = 300 300 300 300 300 275 275	FI (s.u.)	ELD PARAME DO (mg/L) +/- 10% 2. 41 100 1.01 0.97 0.97 0.85 0.84 0.84 0.77	Served in TERS ORP (my) -184 -890 -1067 -132.4 -1544 -246.2 -280.3 -2869	Specific Conductance (mS/cmc) +1-3% 2-536 3.013 3.074 3.111 3.127 3.148 3.163 3.184 3.199	Temp (c) +1-3% 12.04 12.45 12.37 12.27 12.27 12.25 12.11	(NTU) -10 NTU 0 1.5 (Q.Y 3.5 1.8 1.0 8.3 1.3 1.3	5.73 5.73 5.73 5.73 5.73 5.73 5.73 5.73

Date: 12/4/19

Time: 1550

Sample ID: 0 MC-MW-615D

Method of Sample Collection: grain

Analytical Parameters: VOC, MNA, Dissolved metals

Q.C. Sample Type: N/A MS/MSD Duplicate Duplicate

Duplicate Sample ID: N/A

Q.C. Parameters: N/A

Trash picked up?

Well locked?

SIGNED/SAMPLER:



			11 -	MIOIIITO	ring weii				<u> </u>
	A 1 1 6	11			OMC Groundwate				
Well Number:	10	o15D		ma	E 1	Purpose of Sam	pling:	OMC Qu	arterly Sampling
Site:	OMC		Field Conditions	WELL CONDIT					
Well Pad		Acceptable	Not Acceptable	Explain:	ION			-	pg 2 of a
Protective Cas	sing	Acceptable	Not Acceptable	Explain.		А			130) x 0+ 0
Well Casing	•	Acceptable	Not Acceptable	Explain	Se	epg.1		Ĺ	
Locking Cap		Acceptable	Not Acceptable	Explain:		. •			
Well Label (ou	ıtside)	Acceptable	Not Acceptable	Explain:					
Well Label (in:	side)	Acceptable	Not Acceptable	Explain:					
J-Plug	·	Acceptable	Not Acceptable	Explain					
			· VE	PURGE METH	OD		- :		
Date:		Time:		Method:	low-flow				
Total Well Dep	oth (ft)	=							
Depth to Wate	er (ft):	=			CRE	69.1			
Water Column	ı (ft):	=			300	U			
Comments:				1 volume					
				OBSERVATIO	NS				
Odor:	None , L	ow High	, H₂S , Fuel	Like Other:		00 1			
Comments					See	P5 1			
		-	EI	ELD PARAMET	FPQ				
Time	Volume	Rate		DO	ORP	Specific	Temp	Turbidity	Depth to water
ime	(gal)	(mL/min)	ρΗ (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
1535	1	275	9.65	4/- 10%	-1943	3196	10.53	4.8	5.38
1540	11/	275	9,65	(1.12	10.6.0		-	8.1	
	N5.5	-	1.07	0.72			10.54	<u> </u>	538
1545	700	275	7		-194.8	3.208	10.55	7.8	5,38
~	5	ampled	(N) 155	<u> </u>					<u> </u>
	ļ			<u></u>	X				
							1		300

	 				<u> </u>				
				<u>.</u>					
				-					
			<u>.</u>	SAMPLING	<u> </u>				
Date:				Time:		1			Λ
Sample ID:				Method of Sam	ple Collection:	grab	1 50	e po	1
Analytical Para	meters						/	10	
Q.C. Sample T	ype:	MS/MSD	Duplicate	Duplicate Samp	ole (D:	/			
Q.C. Paramete	rs:					1			
Trash picked up			Well locked?			<u> </u>			
SIGNED/SAMP									

Monitoring Well Field Data Sheet - OMC Groundwater Site 10F2 Field Crew: \ (1/KW Well Number: MW 6195 Purpose of Sampling: OMC Quarterty Sampling Site: ОМС Field Conditions: 35°F Donn 1 avindy WELL CONDITION Well Pad Acceptable Not Acceptable Explain: **Protective Casing** Acceptable Not Acceptable Explain: Well Casing Acceptable Not Acceptable Explain: Locking Cap Acceptable Not Acceptable Explain: Well Label (outside) Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain: J-Plug Not Acceptable Explain: **PURGE METHOD** Date /2 3 11 Time: (503 Method: Total Well Depth (ft) = 10.88 Depth to Water (ft): = 4.06 Water Column (ft): = 6.82 Comments: 1 volume **OBSERVATIONS** None Low . Odor: High , H2S , Fuel Like , Other: Clear Comments: FIELD PARAMETERS Volume Rate Time 00 Specific ORP ρН (s.u.) Temp Turbidity (gal) (mL/mio) (mg/L) Conductance Depth to water (°C) (NTU) (mS/cmc) /- 10% +/- 10 mV +/- 3% <10 NTU 1515 04 2.70 8.15 77.2 0.452 7.39 5.6 4.11 0.9 1520 8.10 1.22 0.444 8.11 3.9 4.15 1525 8.13 0.55 8 35 71.0 0 424 416 1530 1.8 813 370 0.37 69.6 3.40 03 0.414 4.16 2.3 1535 350 8.10 0.30 847 0.0 4.15 1540 750 8.09 0.33 0.369 8.39 350 8.06 0.21 6.364 846 00 3.6 350 8.05 0.26 10.7 0 366 8.46 0.0 4.0 750 8.05 0.16 -7.0 0.364 8.41 0.0 4.5 1600 350 8.04 8.39 0.365 0.0 160) 5.0 350 8.04 013 ~25.7 0.365 8.5 10 415 1610 9 03 0.11 38.6 0364 856 0.0 4116 SAMPLING 12/3/14 1625 Sample ID: 0MC-MW-6195 Method of Sample Collection: Analytical Parameters: YOCs, MNA, D.55 Met. Q.C. Sample Type: MS/MSD Duplicate Duplicate Sample ID: 2/ / 4 Q.C. Parameters: Trash picked up? Well locked?) SIGNED/SAMPLER:

Monitoring Well Field Data Sheet - OMC Groundwater Site Field Crew: Field Conditions:

Well Number: MW-6195 OMC Quarterly Sampling Purpose of Sampling: Site: WELL CONDITION Well Pad Acceptable Not Acceptable Explain: **Protective Casing** Acceptable Not Acceptable Explain: Well Casing Acceptable Not Acceptable Explain: Locking Cap Acceptable Not Acceptable Explain: Well Label (outside) Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain: J-Plug Acceptable Not Acceptable Explain: **PURGE METHOD** Date: Time: Method: low-flow Total Well Depth (ft) Depth to Water (ft): Water Column (ft):

Comments:

OBSERVATIONS

Odor;

None Low

High , H2S , Fuel Like , Other:

Comments:

SIGNED/SAMPLER:

			FI	ELD PARAMET	ERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C)	(NTU)	Depth to water (feet)
1615	60	350	803	0.14	-441	0.365	8.63	0.0	4.16
1620	6.5	350	8.03	0.12	-47.5	0.365	8.62		4.16
1425	340	mé							
				-					
					-				
				_					
				_	,				-
			-						
	<u></u>								

			<u> </u>					
						·	1	
			SAMPLING					_
Date:		· <u> </u>	Time: 1 6	25				
Sample ID:			Method of Sam	ple Collection:	grab			
Analytical Parameters:		Jee	Duplicate Santa	_1				
Q.C. Sample Type:	MS/MSD	Duplicate	Duplicate 6an	ole ID:				
Q.C. Parameters:								
Trash picked up?	٧	Vell locked?		<u> </u>				 _

Monitoring Well Field Data Sheet - OMC Groundwater Site Well Number: MW-61912 Field Crew: Klowison Purpose of Sampling: **OMC Quarterly Sampling** Site: 37%, partly Field Conditions: WELL CONDITION Well Pad Not Acceptable ceptable Protective Casino Not Acceptable Explain: Well Casing Not Acceptable Explain: Locking Cap Acceptable Not Acceptable Explain: Well Label (outside) Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain: Acceptable J-Plug Not Acceptable Explain **PURGE METHOD** Date: 12 - 3 - 19 Time: 1500 Method: low-flow Total Well Depth (ft) = 29.6D Depth to Water (ft): Water Column (ft): Comments: OBSERVATIONS Odor: High , H2S , Fuel Like , Other: Comments: clear, overall water finted light overage FIELD PARAMETERS Specific Rate (mL/min) Volume DO ORP Temp Turbidity Depth to water Time (s.u.) Conductance (mg/L) (gal) (mV) (°C) (NTU) (mS/cmc) +/- 0.1 s,u +/- 10% +/- 10 mV +/- 3% +/- 3% <10 NTU 1505 20.4 0.0 300 822 1.17 3.5 1.488 1088 -27.6 1510 0.8 300 834 0.98 1.648 10.95 4.59 0.0 ~I gal 1515 -65.1 300 1.765 8.50 1.85 11.07 6.0 458 1520 ~1.2 300 170 -912 1.814 4.61 8 63 11.28 0.0 1525 300 4.64 8.72 0.47 -146.6 1.848 11.40 0.0 1530 300 8.75 0.40 -175.0 1.848 4.68 11.45 0.0 1535 1:32 8.30 0.34 -193.1 4.66 300 1.873 11.39 0.0 1540 300 8 80 0.29 -2074 4.67 11-34 1.871 0.0 300 1545 8 82 0.28 -214 7 1.874 11.40 4.67 0.0 2 5 gat 1550 300 0.26 871 4.68 -2207 \$ 82 11.42 0.0 1555 2 99Al 8.83 0.25 -226. X 300 868 11.44 0.0 74.70 300 8 34 -232.4 1600 0.24 11:36 4.73 882 SAMPLING Date: 12 - 3-14 Time: 1610 Sample ID: 0MC-MW-6191) Method of Sample Collection: Analytical Parameters: Alkalinity / Anion, TOC, Sulfide, MEE, VOCs, dissolved metals Q.C. Sample Type: NA Q.C. Parameters: NA Trash picked up? Well locked? SIGNED/SAMPLER:

				· 	oring Well				
	-				- OMC Groundwat	er Site			
Well Nu	mber: Mw-	614D	Field Crew: K	Lildon		Purpose of Sar	mpling	OMC Qu	arterly Sampli
Site:	OMC		Field Conditions	30°F,	cloudy win.	dy			
				WELL CONDI	TION	7			
Well Pa	d	Acceptable	Not Acceptable	Explain:					
Protecti	ve Casing	Acceptable	Not Acceptable	Explain	Sec	Pg 1			
Well Ca	sing	Acceptable	Not Acceptable	Explain		10			
Locking	Сар	Acceptable	Not Acceptable	Explain:					
Well Lai	oel (outside)	Acceptable	Not Acceptable	Explain:					
Well Lat	oel (inside)	Acceptable	Not Acceptable	Explain					
J-Plug		Acceptable	Not Acceptable	Explain:					
		,		PURGE METH	HOD				
Date:		Time:		Method:	low-flow	 -			
Total W	ell Depth (ft)	=			Sec	_ 7			
Depth to	Water (ft).	=			200	Po7			
Water C	olumn (ft):								34
Comme	nto-			1 volume					
Comme	ns.								
				OBSERVATIO	MIC				
Odor:	None ,	Low High							
Comme	-		- 00		•				
Commo			50	· Pg 7					
		-	FI	ELD PARAME	TERS				
Time	Volume	Rate		DO	ORP	Specific	Temp	Turbidity	Depth to wate
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
- lus	- A 1	-	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/= 3%	+/- 3%	<10 NTU	11 -4 11
2 TAB	> 13 65	1 300	885	0.24	-235.4	1.879	11.52	0.0	4.74
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	4			SAMPLING					
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Date: i	2 10	-							
	-3-19			Time: (-11)	1610				
Sample I	DML-1	YW-6191		Time: (-11)		grab			
Sample I	DML-1)	Time: (-11)	1610	grab			
Sample I	DML-1	4W-6191 SCC 93 1 MSMSD) -	Time: (-11)	nple Collection:	grab			
Sample II Analytica Q.C. Sam	D: OMC -/ I Parameters:	sec og 1 mamer) -	Time: (+1)	nple Collection:	grab			
Sample II Analytica Q.C. Sam	D: OMC-/ I Parameters: uple Type: NA- ameters: NA	SCC 99 1 MSANGO) -	Time: (+1)	nple Collection:	grab			

			<u>.</u>	Monito	ring Well				
					OMC Groundwate	er Site			
Well Number:	MW-6	205	•	سالامد		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	ОМС			WELL CONDIT	unny, win	.44			
Well Pad		Acceptable	Not Acceptable	Explain:	ION				
Protective Cas	ing	Acceptable	Not Acceptable	Explain:					
Well Casing	_	Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	(Not Acceptable)	Explain	Needs larg	er site lo	ck		
Well Label (out	tside)	Acceptable	Not Acceptable	Explain	J	1			
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain					
J-Plug		Acceptable	Not Acceptable	Explain:					
Doto: No. 1	1 >4	Time: C	2023	PURGE METH					
Total Well Dep	• • •	Time: 67	30	Method	low-flow				
Depth to Water		= 453	-						
Water Column		= 6.49		1.1					
Comments		⊍া⊺		1 volume					
Go									
				OBSERVATIO					
Odor: <	None, Lo	w High	H₂S , Fuel	Like , Other:	Slight Sulh	ar		·	
Comments:	Small	blech f	lecks in	water	•				
	Volume	Rate	FI	ELD PARAMET DO	ORP	Specific	Temp	Turkidika	Death to water
Time	(gal)	(mL/min)	ρH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	Turbidity (NTU)	Depth to water (feet)
0740	0.4	300	6.64	3.42	70.5	1.098	8-63	<10 NTU	4.82
6745	0.4		C	1.44	T	. 13		8.2	475
0750	1.2	300	_		-16.9	1.081	8.57		4.76
	<u> </u>	300	6.69	1.15		1.082	8.70	21.9	
0755	1.6	300	6.71	1.02	-50-3	1.076	867	1.6	4.76
0800	27	300	6.71	0.94	~60.9	1.077	8 66	2.8	4.78
0805	7.6	300	6.72	0.85	-68.2	1.071	8 86	0.0	4.48
0810	2.8	300	6.43	0.83	-68.3	1.090	9.00	0.0	4.80
0815	3.2	300	6.43	0.80	-70.9	1.067	9.03	0.0	4.81
				SAMPLING					
Date: 12 - 4	-19			Time: 081	5				
Sample ID: 0	•	v-6205	1	Method of Sam	ple Collection:	grab			
				MPE N	DC. Alle.	lued metals	المالية	Je.	
Q.C. Sample Ty			Duplicate			nool becal)	, , , , , , , , ,		
Q.C. Parameter	ii n	Eurocara (Cara	critical distriction		DESCRIPT.				
Trash picked up			Well locked? N	o lock					
SIGNED/SAMP	· ·	//	h	- •					
		· /					•		

				Monito	ring Well				
			Fiel	ld Data Sheet -	OMC Groundwate	er Site			
Well Number	MN-6	200	Field Crew:	GIKW		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:	30 F	Sunny Wir	de			
				WELL CONDIT	ION				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Ca	ising /	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:	.1)				
Locking Cap		Acceptable	Not Acceptable	Explain:	Need bigg	erlock			
Well Label (o	utside)	Aeceptable	Not Acceptable	Explain:	U				
Well Label (in	iside)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
Date: Z L	4	Time: 67		PURGE METH Method:	low-flow				
Total Well De	•	= 30.71	<i>3 7</i>	mourou.	ion non				
Depth to Wate		= 3.78							
Water Colum		= 26 93		4.4					
	(.4.	(10,1)		1 volume					
Comments:				7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7					
	·			OBSERVATIO	NS .				
Odor:	None , L	ow , Thigh	, Fuel						
Comments:	Gray				·3 bub			10/7/14	//
· <u>.</u> .				/ ELD PARAMET		OR COVE	y m	- ne	
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L) +/- 10%	ORP (mV) [+/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
0740	0.2	250	7.41	2.20	-244.7	2.132	1014	1263	5.49
0745	0.5	250	7.57	057	-3278	2.252	11.04	826	5.61
0450	0.7	250	761	0.26	-3358	2.305		67.8	5.61
1347	40	1	-	0.13	1	 			
(1)		250	7.67		-337, 2 - 334.1		11.60	37.7	5.65
0800	1.2	258	7.70	0.10		2.349	11.74	244	5.69
0405	1.5	200	770	0.07	- 354.4	2-373	11.47	34.5	5.66 5-67 5-69
0810	1.7	200	7.71	400	-355.2		11-84	338	5-67
0815	1.9	200	7.76	000	-349.3	2.383	12.05	346	5.69
0860	BAN	Pit							
									, <u>,</u>
						-			
	1						1		
	1		L	J	-				
Data: 4m I. /	1.0			SAMPLING	1.85		8		
Date: 12/4				Time: 092					
		W-620 F		Method of Sam	ple Collection:	grab			
Analytical Para	ameters: UC	ics, MN.	A, Diss A	let	4				
Q.C. Sample 1	Type: NA	MS/MSD	Duplicate	Duplicate Samp	ple ID: N/A				
Q.C. Paramete	ers: N/A)		ŧ				
Trash picked u	ıp? 🗸 /	/	Well-tockett?				-		
SIGNED/SAM	PLER:	(A							
		1							

Monitoring Well Field Data Sheet - OMC Groundwater Site Well Number: MW-6215 pers(Field Crew: Purpose of Sampling: **OMC Quarterly Sampling** Field Conditions: 30°F SM Site: OMC WELL CONDITION Well Pad Acceptable Not Acceptable Explain Protective Casing Acceptable Explain: Not Acceptable not labbred on outside Well Casing cceptable Not Acceptable Explain Locking Cap cceptable Not Acceptable Explain No Acceptable Well Label (outside) Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain cceptable J-Plug Not Acceptable Explain **PURGE METHOD** Date: 12/6/19 Time: 0750 = 10.89 = 4.80 Method: low-flow Total Well Depth (ft) Depth to Water (ft): 1-0 =6.09 Water Column (ft): Comments: **OBSERVATIONS** None Low High Odor: HS , Fuel Like Other Comments FIELD PARAMETERS Specific Volume Rate DO ORP Temp Turbidity Depth to water рΗ Time (s.u.) Conductance (mL/min) (mg/L) (NTU) (mV) (°C) (mS/cmc) ⊬- 10 mV H- 3% -/- 0.1 s,u, H- 10% +/- 3% <10 NTU 300 1775 350 0.94 191.5 1.617 7.16 0755 0800 8,40 6.14 350 .24 0.54 .615 05 0805 350 7.27 0.47 187.2 590 8,44 0.0 350 7、32 0.35 184.4 0810 580 8.55 0 0 6.14 0815 350 7.34 0.30 18Z,5 8.59 565 0.0) 8ZO 180.6 350 7.35 57 8.62 0.0 141

Date: 12/6/19

Time: 0830 /840 (FD)

Sample ID: 0MC-MW-62/S

Method of Sample Collection: grab

Analytical Parameters: SVF.UL, TOC, MEE, VOLS, AIK, ANIOS, METCALS

Q.C. Sample Type: MS/MSD Ouplicate Duplicate Sample ID: 0840 OMC MW-62/S-R

Q.C. Parameters:

Trash picked up? W

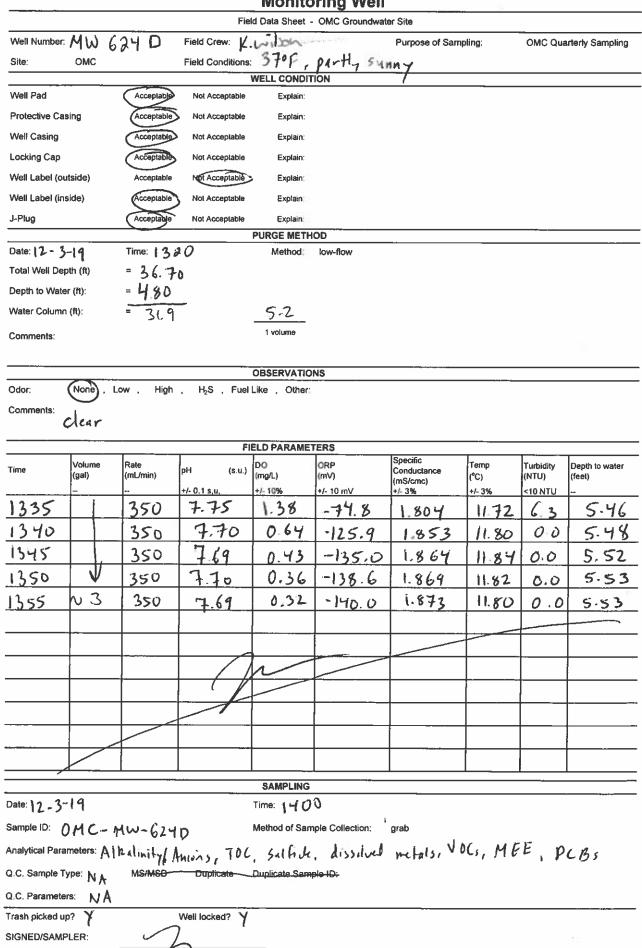
Well locked?

				Monito	oring Well				
			Fiel	d Data Sheet	- OMC Groundwat	er Site			
Well Number:	111W-(01150		Ma		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	ОМС		Field Conditions:	30 F S.	Inda	<u> </u>			
187-II D- 4			·	WELL CONDI	TION J				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	ung	Acceptable	Not Acceptable	Explain.					
Well Casing		Acceptable	Not Acceptable	Explain					
Locking Cap	talida)	Acceptable	Not Acceptable	Explain:	AG T.I. I				
Well Label (ou	-307	Acceptable	Not Acceptable		No label				
Well Label (ins	iide)	Acceptable	Not Acceptable	Explain					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	IOD	.			
Date:		Time: 071	50	Method:	low-flow				
Total Well Dep	th (ft)	= 20.70	(
Depth to Water	r (ft):	=491							
Water Column	(ft):	= 2483		4.0					
Comments:		w 0 J		1 volume					
				OBSERVATIO	NS		-	 .	
Odor:	None , Lo		3h 3h	Like Other:		60			
Comments	slight	My yell	o~						
		. 10.				·—·			
	Valuma	Deta	FN	ELD PARAME	T	Specific	T	- 379	
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
A707	-	200	+/- 0.1 s,u,	+/- 10%	+/- 10 mV	+/- 3%	+/- 3%	<10 NTU	- C .3 .73
0155		250	666	1.46	120.1	α,4+1	9.38	13.3	(0.40
0800		250	(e. +0	1-00	2173	2448	9 54	131	6.6
0805		250	6.66	0-85	208,6	31127	11 32	4.5	789
0810		250	666	0.74	2074	3.130	11.20	5.7	7.90
0815		250	6.65	0.79	204.0	3.144	11-62	3.4	8.10
0520		250	6.65	1.45	204.6	3.146	11.62	2.9	8.10
6852	a	250	6.05	1.43	204.1	3.143	11-75	19	8.10
0830	24	250	6-65	1.42	204 1	3143	1175	21	8.10
		Med P				0 1 1 2	11, 13	u.	- 10
		INDA C	0000						
									5.
-						· · · · · · · · · · · · · · · · · · ·		5	
		<u></u>						~	
				SAMPLING			-		
Date: [2/6/	19			Time: 073	7				
Sample ID: 01	UC-MI	N-6211	>		nple Collection:	grab			
Analytical Parar	meters: V (K, Diss	olved met	als, M	AU				
Q.C. Sample Ty	pe: N/A	MS/MSD	Duplicate	Duplicate Sam	ple ID: N/A				
Q.C. Parameter	•				{//				N.
Trash picked up	<u> </u>		Well locked?						1
SIGNED/SAMP	LER:	ľ	Vho	1.					
	•		- KACAN				_		

	_				oring wei				
					- OMC Groundwa				
Well Number.		532	₩	GIKW		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	ОМС			WELL CONDIT	Hercast 1	vinay			
Well Pad		Acceptable	Not Acceptable	Explain:	1011	<u>.</u>			
Protective Ca	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (or	utside)	Acceptable	Not Acceptable	Explain.					
Well Label (in	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
	.1.		_	PURGE METH					
Date: /2/		Time: 09	50	Method:	low-flow				
Total Well De		= 10.60 = 2.41	()						
Water Column	, ,	, ,	•	1.3					
	. (17.	=7.45		1 volume					
Comments:				Voidille					
				OBSERVATIO	NS				
Odor:	None L	.ow , High	, H₂S , Fuel	Like , Other:		,			
Comments:		. 10							
	Ora	nge sh	to A	20					4
		V	FI	ELD PARAMET	TERS	Io			
Time	Volume (gal)	Rate (mL/min)	ρH (s.u.) +/- 0.1 s,u,	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) i+/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
0955	0.4	309	7.62	1.48	-736	0.517	870	1260	2.834
1000	0.8	300	7.54	0.50	-105.2	0523	9.09	32.3	285
1005	1.2	300	451	0.25	-120.2	0.525-	9.17	13.8	285
10,0	1.6	300	7.50	0.22	-1293	0.522	9.21	4.0	1.80
1014	+	300	750			0,520	4.26		2001
	2,0		7.50	0.15	-138.5	0.520		I .	2.84
1010	2.4	300	4.30	0.17	-128.5	0.120	9.27	1.4	7.83
1025	Th	PLE							
	 					1			·
	<u> </u>	-							
		ļ							
	<u></u>								
		2		SAMPLING					
Date: /2/	5/19			Time: SA	HMPI =	@ 10:	2 5	-	
Sample ID:	once-	uw-6	235		ple Collection:	grab	-		
Analytical Para	meters: VC	CZ MA	1A, D:55	MeL	PLDI				
Q.C. Sample T	ype: NA	MS/MSD	Duplicate						
Q.C. Paramete		_			* *				
Trash picked u			Well locked?						
SIGNED/SAMF	PLER:		1-X						
		/							

Field Data Sheet - OMC Groundwater Site					Monito	oring Well				
Field Conditions: 32				Fie			er Site			
Note Pad	Well Number:	MW-62	130					oling	OMC Qua	rterly Sampling
New Face New Acceptable Explain N	Site:	OMC	<u>. </u>	Field Conditions:	32'F,	cloudy, w	nly			
New Column (n)	Well Pad		Acceptable			TON	,			
New Column New Acceptable Explain: Park Explain: P	Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Test Label (ordiside)	Well Casing		Acceptado	Not Acceptable	Explain:					
Not Acceptable Explain Purp P	Locking Cap		cceptable	Not Acceptable	Explain:					
Purply	Well Label (ou	utside)	Acceptable	Not Acceptable	Explain:	Mone				
Purple P	Well Label (in:	side)	cceptable	Not Acceptable	Explain:					
Part 1 1 1 1 1 1 1 1 1	J-Plug		Acceptable	Not Acceptable		IOD				
Color Colo	Date: 12 / 3	3/19	Time: 04	50						
Signature Sign			•							
Signature Sign	Depth to Wate	er (ft):		-	e					
Destroy Dest	Water Column	n (ft):			5.2					
None	Comments:		0170 (1 volume					
None				·-						
FIELD PARAMETERS FORD Conductance (mS/cmc) (mS/csmc) (mS	Odor:	(None Lo	ow . High	H-S Fuel						
FIELD PARAMETERS The ph (s.u.) Ph (Comments:	\sim	,	, .2- ,						
Note Parameters: Alkalinity Anions, dissipated to perfect to Parameters: Note Par		Clear								
			r	FII	ELD PARAME	TERS	Io			
1955 20 2 200 7.86	Time			pH (s.u.)		1.	Conductance	1 '		1 '
1000 6.4 200 7.80 3.18 36.1 0.520 9.27 0.0 3.60 0.55 0.67 250 7.71 0.86 -13.2.4 0.535 9.77 0.0 3.66 0.67 250 7.71 0.86 -13.2.4 0.538 9.77 0.0 3.63 0.55 1.29.1 250 7.71 0.86 -13.2.4 0.538 9.77 0.0 3.63 0.55 1.29.1 250 7.72 0.11 -139.0 0.538 9.51 0.0 2.98 0.45 1.49.1 300 7.68 1.09 -129.3 0.578 10.65 0.0 3.90 0.50 1.59.1 150 7.66 0.51 -149.3 0.578 10.65 0.0 3.90 0.50 1.59.1 150 7.66 0.51 -149.3 0.576 10.37 0.0 3.15 0.55 1.79.1 200 7.65 0.29 -150.5 0.585 10.61 0.0 3.80 0.10 0.1.99.1 200 7.65 0.28 -151.7 0.581 10.75 0.0 3.81 0.95 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.1	A 0 11 15	-		- 4					<10 NTU	
005 0.67 250 7.71 0.86 0.535 9.72 0.0 3.66 010 1 gal 250 7.71 0.86 -13.2.4 0.538 9.77 0.0 3.63 015 1.2 gal 250 7.71 0.86 -13.2.4 0.538 9.77 0.0 3.63 015 1.2 gal 250 7.72 0.71 -139.0 0.538 9.51 0.0 2.98 0.45 1.4 gal 300 7.68 1.09 -129.3 0.578 10.65 0.0 3.90 0.50 1.5 gal 150 7.66 0.51 -149.3 0.576 10.37 0.0 3.75 0.55 1.7 gal 200 7.65 0.29 -150.5 0.585 10.61 0.0 3.80 1100 1.7 gal 200 7.65 0.28 -151.7 0.581 10.75 0.0 3.81 SAMPLING Time: 1106 malytical Parameters: Alkalinity Anions, dissolved methol, 5.1 feb, TO c. MEE, VOCs., PCBs C. Sample Type: NA MSMSD Deplicate Duplicate Sample 10. C. Parameters: NA Well locked?		202	200	4			0-498	10.04	0.0	
010		 V 		1					0.0	
O15		0.67				-1068	0.535	9.72	0.0	
Punch Stopped Working - replaced with new purpouts 1.4g. 1300 7.68 1.09 -129.3 0578 10.65 0.0 3.90 050 1.5g. 150 7.66 0.51 -149.3 0576 10.37 0.0 3.15 0.55 17g. 1200 7.65 0.29 -150.5 0585 10.61 0.0 3.80 10.0 1.9g. 1200 7.65 0.28 -151.7 0.581 10.75 0.0 3.81 10.0 1.9g. 1200 7.65 0.28 -151.7 0.581 10.75 0.0 3.81 10.75 0.0 3	1010	lgal	250	4.71	0.86	-132.4	0.538	9.77	0.0	363
045 1.4g. 300 7.68 1.09 -129.3 0.548 10.65 0.0 3.90 050 1.5ga 150 7.66 0.51 -149.3 0.546 10.37 0.0 3.15 055 17ga 200 7.65 0.29 -150.5 0.585 10.61 0.0 3.80 1100 1.9ga 200 7.65 0.28 -151.7 0.581 10.45 0.0 3.81 SAMPLING Time: 106 ample 10: OMC - MW-6230 Method of Sample Collection: grab nallytical Parameters: Alkalinity Anions, dissolval mchalls , salfak, Toc MEE, VOCs., PCBs C. Sample Type: NA MS/MSD Duplicate Duplicate Sample 10: C. Parameters: NA Well locked? Well locked?	1015				0.41	-139.0	0.538			2.98
1.4g. 300 7.68 1.09 -124.3 0.578 10.65 0.0 3.90			مدل	Stopped	wor	hing-n	placed in	74 no	w po	
150 1.5gal 150 7.66 0.51 -149.3 0.576 10.37 0.0 3.75 0.55 1.7gal 200 7.65 0.29 -150.5 0.585 10.61 0.0 3.80 1100 1.7gal 200 7.65 0.28 -151.7 0.581 10.75 0.0 3.81 12-3-19 Time: 1106 ample 10: 0MC - MW - 6230 Method of Sample Collection: grab malytical Parameters: Alkalinity Anims, dissalved metals, salfed, TOC MEE, VUC.5., PC.B.5 C. Sample Type: NA MS/MSD Duplicate Duplicate Sample 10:	045	1.4901	300	7.68	1.09	-129.3	0.578	10.65	00	
SAMPLING Time: 11 06 and 12 0 0 7.65 0.28 -151.7 0.581 10.45 0.0 3.81 Time: 11 06 Method of Sample Collection: grab malytical Parameters: Alkalinity Anims, dissolved methol, salfak, TOL MEE, VUCs., PCBs C. Sample Type: NA MS/MSD Duplicate Duplicate Sample 10: C. Parameters: NA ash picked up? Y Well locked?	1050	1.5 JAI	150	7.66	0.31	-149.3	0 576	10.37	0.0	3.75
SAMPLING Time: 11 06 and 12 0 0 7.65 0.28 -151.7 0.581 10.45 0.0 3.81 Time: 11 06 Method of Sample Collection: grab malytical Parameters: Alkalinity Anims, dissolved methol, salfak, TOL MEE, VUCs., PCBs C. Sample Type: NA MS/MSD Duplicate Duplicate Sample 10: C. Parameters: NA ash picked up? Y Well locked?	1055	1. Fact	200	7.65	0.24	-150.5	0 585	10.61	0.0	3.80
SAMPLING Time: 1106 ample ID: OMC - MW-6230 Method of Sample Collection: grab malytical Parameters: Alkalimity Anims, dissalval metals, salfat, TD L MEE, VUCs., PCBs C. Sample Type: NA MS/MSD Duplicate Duplicate Sample ID: C. Parameters: NA ash picked up? Y Well locked?	1100	1.9901	200	7.15	0.28	-151.7	0.581	10.45	0.0	3.81
Time: 1106 ample ID: OMC-MW-6230 Method of Sample Collection: grab malytical Parameters: Alkalinity Anians, dissolved methols, salfed, TOC MEE, VUCs., PCBs C. Sample Type: NA MS/MSD Duplicate Duplicate Sample ID: C. Parameters: NA ash picked up? Y Well locked?										12.
Time: 1106 ample ID: OMC-MW-6230 Method of Sample Collection: grab malytical Parameters: Alkalinity Anians, dissolved methols, salfed, TOC MEE, VUCs., PCBs C. Sample Type: NA MS/MSD Duplicate Duplicate Sample ID: C. Parameters: NA ash picked up? Y Well locked?										
manufaction of Sample Collection: grab malytical Parameters: Alkatinity Anions, dissolved metals, salfed, TO e MEE, VUCS., PCBs C. Sample Type: NA MS/MSD Duplicate Duplicate Sample 10: C. Parameters: NA ash picked up? Y Well locked?					SAMPLING					
nalytical Parameters: Alkalinity Anians, dissolved netals, salfed, TOL MEE, VUCS., PCBs C. Sample Type: NA MS/MSD Duplicate Duplicate Sample 10: C. Parameters: NA ash picked up?	Date: 12 - 3	3-14			Time: 0	6				
C. Parameters: N A well locked?							-			
C. Parameters: N A well locked?	Analytical Para	meters: A (katinity I	Anions, diss	alved n	hali s. 16.	L Th. MI	F das	. 01	rs s
ash picked up? Y Well locked? Y	Q.C. Sample Ty	уре: NÅ	MS/MSD	- Duplicate	Duplicate Sam	ple-ID:	100/16	,	カッチン	· • • •
	Q.C. Paramete	rs: NA								
GNED/SAMPLER:	Frash picked u	p? √		Well locked?		1.1.1		···		
	SIGNED/SAMP	PLER:	1	2						

			Fiel	Monito d Data Sheet -	OMC Groundwate	er Site			
Well Number:	MW-6	245	Field Crew: J.	archam	\	Purpose of Samp	ling:	OMC Qua	rterly Sampling
Site:	ОМС		Field Conditions:						
				WELL CONDIT	ION				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain	None				
Well Label (ou	,	Acceptable	Not Acceptable		1001-	_			
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain: PURGE METH	OD				
Date:		Time: 13 2		Method:	low-flow				
Total Well Dep	oth (ft)	= 10 86							
Depth to Wate	r (ft):	=4.73	-						
Vater Column	(ft):	= 6.13		0,1					
Comments:				1 volume					
				OBSERVATIO	NS				
odor:	None Lo	w , High	, H₂S , Fuell	Like , Other:					
comments:	Clear								
				ELD DADAMET	TERE				
	Volume	Rate	i	ELD PARAMET	ORP	Specific	Temp	Turbidity	Depth to water
ime	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	്രാ	(NTU)	(feet)
1234	0.96	350	7.87	2.04	77.9	0521	997	<10 NTU	4.79
1340	1.0	350	771	1.61	803	0.547	10.00	0.0	4-79
₹4 ~	1.4	350	7.63	0.59	1	0.567		0.0	4.77
1300	1.9			0.49	768		10.04	0.0	1
1350	<u>' ' '</u>	350	7.59		7.3%	0.575			4.77
1355	2,4	350	7.56	637	74.8	0.575	10.01	0.0	4.29
	2.8	350	154	0.32	73.9	6.582	9.97	0.0	4.79
1400				- 1 m	1 77 7 1	A 15-45	000	0.0	4.79
1405	3,3	350	7.52	041	72.2	0506	999	100	
•	3,3	350 UPLE	7.52	041	72.2	0 5 06	7.79		
1405	3,3 5A	uple		641	72.2	0.506	7.79		
14105	3,3 5A			541	76.2	0.206	7:19		
14105	3,3 5A	uple		641	F C - C	0.306	7:79		
14105	3,3 5A	uple		041	P	0.506	7.79		
14105	3,3 5A	uple			P C - C	0.506	7.19		
1405 1410 1415	3,3 54 FOS	AMPLE		SAMPLING		0.500	719		
1405 1410 1415	3,3 505 FOS	MPLE AMPLE		SAMPLING Time: /4/0	7+1415		7.19		
1405 1410 1415	3,3 FOS FOS	AMPLE AMPLE 9 45		SAMPLING Time: /4/0 Method of Sam	+ 1415	grab	719		
1405 1410 1415	12/3/11 12/3/11 12-02 meters: VC	AMPLE AMPLE 9 45 VS, M N	14 DISS	SAMPLING Time: / 4/0 Method of Sam	ple Collection:	grab			
14105 1410 1415 Date: Date: Date: Analytical Para	3,3 FDS 12/3/11 12-C2 meters: VC	AMERICA AMERICA 9 45 NG, M M MS/MSD	4 DISS	SAMPLING Time: /4/C Method of Sam My /- / Duplicate Sam	+ 1415	grab			
pate: 194 manalytical Para 1. C. Paramete	12/3/11 12/3/11 12-C2 meters: VC	AMERICA AMERICA 9 45 NG, M M MS/MSD	Duplicate D. 15 Met	SAMPLING Time: /4/C Method of Sam My /- / Duplicate Sam	ple Collection:	grab			
14105 1410 1415 Date: Date: Date: Analytical Para	12/3/11 12/3/11 12-C2 meters: VC	AMERICA AMERICA 9 45 NG, M M MS/MSD	4 DISS	SAMPLING Time: /4/C Method of Sam My /- / Duplicate Sam	ple Collection:	grab			
ate: Manage of the second of t	12/3/11 12/3/11 12/3/11 12/3/11 12/3/11 12/3/11 12/3/11 12/3/11 12/3/11 12/3/11 12/3/11	AMERICA AMERICA 9 45 NG, M M MS/MSD	Duplicate D. 15 Met	SAMPLING Time: /4/C Method of Sam My /- / Duplicate Sam	ple Collection:	grab			



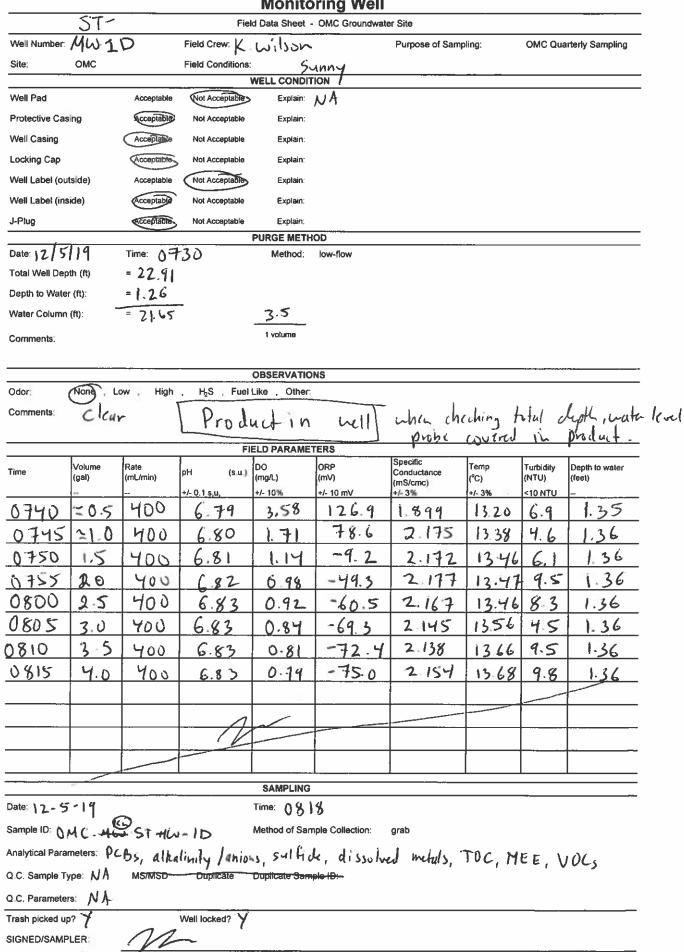
				<u> Monito</u>	ring Well				
			Fie	ld Data Sheet	OMC Groundwate	er Site			
Well Number:	MU-C	255	Field Crew: T	BIKW		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:	יווש					
				WELL CONDIT	TON				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing -	Acceptable	Not Acceptable	Explain					
Well Casing		Acceptable	Not Acceptable	Explain:	•				
Locking Cap		Acceptable	Not Acceptable	> Explain:	reeds	19gre-	toco	<u>'</u> C_	
Well Label (ou	rtside)	Acceptable	Not Acceptable	Explain:	, -	1	_		
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug	~	Acceptable	Not Acceptable	Explain:					
				PURGE METH	OD				
Date:		Time: (5 3	5	Method:	low-flow				
Total Well Dep	oth (ft)	= 11.60	7						
Depth to Wate	r (ft):	= 799	5	14					
Water Column	(ft):	= 4, 2	2	<u> </u>					
Comments:				1 volume					
	$\overline{\wedge}$	·		OBSERVATIO	NS	<u></u>			
Odor:	None, L	ow , High	, H₂S , Fuel	Like , Other:					
Comments:	<u> </u>								
		1	FI I	ELD PARAME		Specific	1	Т	I
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Conductance	Temp (°C)	Turbidity (NTU)	Depth to water (feet)
B			+/- 0.1 s,u,	+/- 10%	+/- 10 mV	(mS/cmc) +/- 3%	+/- 3%	<10 NTU	
1045	4.6	450	8.20	4.07	~ 41. Z	0.541	899	1824	3.01
1050	1.2	450	800	17.84	-91.9	0.533	8.84	713	3.01
1053	1.8	450	7.86	0.48	-124.3	0.534	8.71	340	3.02
1100	2.4	450	7.82	0.31	130.6	0.535	8.72	19.0	3.02
	+	450	7.79	0.24				9.7	
160	3.0		_		-136.0		8.81		3.02
	3.5		7.76		-141.3		6.82	8.7	
1115	4.0	450	775	0.19	-143.2	0538	8.83	7.2	3:00
1120	SAL	W LE	-						
				7					
				·		-			.
	<u></u>			<u> </u>	<u> </u>	<u> </u>	<u></u>		
				SAMPLING	2 ^				
Date: /2/5	•			Time: //					
Sample ID: C	MC -	N6-6	255	Method of Sam	ple Collection	grab			
			NA, D.	ss Met					
Q.C. Sample Ty	pen/4	MS/MSD	Duplicate	Duplicate Sami	ple ID: N/A				
Q.C. Parameter	•		,		, - , ,				
Trash picked up	<u> </u>		Well locked?	ſ	 				
SIGNED/SAMP	٦ /			ť					
JIGNED/SAMP	LER:								
		//							

			e:-		ring Well				
Mell Number	Mi. L.C	a < ()			OMC Groundwat		P	0110.0	
Well Number: Site:	OMC G	230	Field Conditions	atic Wil.	امرا	Purpose of Samp	ning.	OMC Qua	rterly Sampling
	ONIC			WELL CONDIT		W WINDS			
Well Pad		Acceptable	Not Acceptable	Explain:			10.		
Protective Cas	sing	cceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain					
Locking Cap		Acceptable	Not Acceptable	Explain: A	seeds lung	a lock			
Well Label (ou	tside)	Acceptable	tot Acceptable	Explain:	J				
Well Label (ins	ide)	Acceptable	Not Acceptable	Explain:					
J-Plug		acceptable	Not Acceptable	Explain					
				PURGE METH	DD				
Date: 12 - 5	•	Time: 1 0 3		Method:	low-flow				
Total Well Dep		30.0	7						
Depth to Water		= 3.56		(1)					
Water Column	(ft)	= 265	1	43					
Comments:				1 volume					
	5.5								
Odos	(Jana) La	u. Liab		OBSERVATION	VS.				
Odor:	None Lo		- 20	Like , Other:					
Comments	Asllon	brown	color						
			FI	ELD PARAMET	FRS		·		
Time	Volume	Rate		DO	ORP	Specific	Temp	Turbidity	Depth to water
I HITE	(gal)	(mL/min)	ľ í	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
1045	0.5	400	7.84	1.95	+/- 10 mV	2.357	11.73	<10 NTU	4.02
1050		400	827	1.30	-51.4	2.412	11.82	1/ 4	4.04
1055	1.0		854	0.48	-86.1	2.525		16:1	402
	20	400	8.60		- 94.1	2.532	11.61	16.1	
1100	_			0.87		22:362	11.68	14.0	4.02
1105	2.5	400	8.57	082	-94.9		11.69	8.9	4.02
1110	3.0	400	8.62	0.78	-98.3	2.526	11.60	83	4.01
1115	3.5	400	8.62	0.76	- 97.6	2529	11:67	9.1	4.01
	<u></u>					l			
Date: 12 - 5	- 14			SAMPLING	·				
•	•	. 2000		Time: 1 1 1					
Sample ID: O				Method of Sam		grab			
Analytical Parar	meters: A	kulinity /	Anims, s	ulfide,	dissalul u	netals, TOC	MIF	Mar	
Q.C. Sample Ty	pe: NA	MS/MSD.	Duplicate	Ouplicate Samp	ie ID:	٠٠٠٠٠٠ , ١٠٠	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, 500	5
Q.C. Parameter	's: N.								
rash picked up		~/	Well locked? N	o lock					
GIGNED/SAMP	•	111	2						
								_	

				4	ring Well	tor Sito			
Well Number:	MLAG	165		willow	ONIC Groundwar	Purpose of Sam	olina:	OMC Ous	arterly Sampling
Site:	OMC		Field Conditions	*	anny win		,	OMO QUI	atony camping
				WELL CONDIT		ay			_
Well Pad		Acceptable	Not Acceptable	Explain	NA				
Protective Cas	sing	Acceptable	Not Acceptable	Explain					
Well Casing		Acceptable	Not Acceptable	Explain:	. 1 . 1 . 1	, 1			
Locking Cap		Acceptable	Not Acceptable		Need lang	ga lock			
Well Label (ou	,	Acceptable	Not Acceptable	Explain					
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain PURGE METH	OD				
Date: 12 4	119	Time: 08	52	Method:	low-flow				<u> </u>
Total Well Dep	oth (ft)	= 12.5	2						
Depth to Wate	r (ft):	= 5.54							
Water Column	(ft):	= 698	 -	(-)					
Comments:				1 volume					
04	62	16-6		OBSERVATIO	NS				·
Odor: Comments:	(None), Lo	ow , High	, H ₂ S , Fuel	Like , Other:					
	Grange	flakes							
			FI	ELD PARAMET	ERS	10.00			
Time	Volume (gal)	Rate (mL/min)	pH (s.u.) +/- 0.1 s,u,	DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Specific Conductance (mS/cmc) +/- 3%	Temp (°C) +/- 3%	Turbidity (NTU) <10 NTU	Depth to water (feet)
0900	=0.4	350	7.16	2.62	14.5	1.324	9.56	56.3	5.63
0905	-0.8	350	7.16	1.31	-18-2	1.699	9.84	16.2	5.63
0910	112	350	7.17	1.09	-36.6	1.608	9.77	10-6	5.63
0915	=1.6	350	7.17	0.92	-56.7	1.494	9.86	6.6	5.63
0920		350		0.86	-65.6	1.444	9.43	4.0	5.63
0925		350	7.17	0.81	-77.2	1.402	9.96	1.3	5.63
	229	350	7.18	0.77	-83 5	1-393	9.91	0.2	5.63
0935		350	7.18	0.74	-89.1	1-357	9.99	0.0	5.63
0970		350	7.18	0.73	-41.5	1	10.08		5-63
0170	0.0	330	4.10	0,79	11.7	1. 367	10.05	3:0	7.07
				M					
	-			1					
				/					
	. 1 .			SAMPLING					
Date: 12/4		20		Time: 094	•				
Sample ID: O				Method of Sam		grab			
Anaiytical Parai	meters: A	FAlinty /	gnishs, TO	C. MEE	NOC5, 50	ifide, diss	iolved m	ctal,	
Q.C. Sample Ty		MS /MSD	- Duplicate	Duplicate Samp	ole IO:				
Q.C. Parameter			Well locked?	مایرا	<u></u>				
Frash picked up SIGNED/SAMP	ŧ	1/1	A Sell locked & M) LVCK					
,, UNICUIONIVIE		1//	_	_			<u> </u>		

			P:-		oring Well	nr Cita	.		
Wall Number	70	0.15		/	- OMC Groundwate		-li	0110	- deals Or
Site:	MWC	261	Field Crew:		Sunny Wr	Purpose of Sam	pling:	OMC Qu	arterly Sampling
Oito.			Tield Collabora	WELL CONDI		4(9			
Well Pad	(Acceptable	Not Acceptable	Explain:					
Protective Ca	asing	Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:	reed bi	jeger h	ock		
Nell Label (o	utside)	Acceptable	Not Acceptable	Explain:	Ü				
Well Label (ir	nside)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
Date: / 1/4	ilia	Time: O%	53	PURGE METH Method:	IOD low-flow				
otal Well De	• •	= 29			·- 				
Depth to Wat	er (ft):	= 5 76							
Vater Colum	n (ft):	=73-58		3.8					
Comments:		<i>U</i> -		1 volume					
				OBSERVATIO	NS		- 37		
)dor:	Hone, L	ow High	, H₂S Fuel	Like , Other:					
omments:	clade	wake-							
	-		FI	ELD PARAME	TERS	 .			
me	Volume	Rate	[pH (s.u.)	DO	ORP	Specific Conductance	Тетр	Turbidity	Depth to water
	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/= 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
09.05	0.4	300	765	1.49	-176.7	1.454	11.39	30.6	6.40
910	0.8	500	7.64	0.81	-194.7	1.735	11.68	9.9	1.30
10415	1.2	300	7.72	042	- 211.7	1.855	11.73	4.4	6.38
0910	1.6	300	7.71	0 38	-218.0	1.909	11.82	4.4	6.75
0915	1.0	300	776	0.29		1.983	12.00		
	2.4	300	7.75	 	-274.0			_	
0930	-	 		6.24	1225.5		11.95	0.7	6.37
	2.8	300	7.75	0.0-1	-227.2	1.964	11.98	0.1	6.72
7940	1 1	400							
							<u> </u>		
	<u> </u>								
				<u> </u>					
				SAMPLING					
ate: /2/4				Time: OG	CDI				
ample ID: (ME-1	1W-620	êD.		ple Collection:	grab			
nalytical Para	ameters: V	OC, MNA	, DisgM	et	,				
	Type: N/4-		Duplicate	Duplicate Sam	ple ID: N/A				
.C. Paramete		-0.1			, - , -				
ash picked u			Well jocked?						
asii picked d									
GNED/SAMI	PLER: (A.						

				Monito	ring Well				
			Fie	ld Data Sheet -	OMC Groundwate	er Site			
Well Number:	ST-ML	1-15	Field Crew:	56/K-W		Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	ОМС		Field Conditions:	- /-/-/-	Sunny 1	nala			
Moll Pod		2		WELL CONDIT	ION '				
Well Pad Protective Cas	ina (Acceptable Acceptable	Not Acceptable Not Acceptable	Explain:					
Well Casing	arig (Acceptable	Not Acceptable	Explain Explain					
Locking Cap		Acceptable	Not Acceptable	Explain					
Well Label (out	tside)	Acceptable	Not Acceptable	Explain:					
Well Label (ins	·	Acceptable	Not Acceptable	Explain:					
J-Plug	,	Acceptable	Not Acceptable	Explain					
	,		,	PURGE METH	OD			<u>.</u>	
Date: 12/5/	119	Time: 07	35	Method:	low-flow				
Total Well Dep	th (ft)	=11.40	<i>)</i> -						
Depth to Water	r (ft):	= 1.45	**) (6					
Water Column	(ft):	= 9.95							
Comments:				1 volume					
				OBSESSA	NO.				
Odor:	None Lo	ow , High	. H ₂ S Fuel	DBSERVATIO	NS		<u></u>		
Comments:		, , , , , , , , , , , , , , , , , , ,	. 120	ENG , COICH					
 .			FI	ELD PARAMET	TERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP (mV)	Specific Conductance	Temp	Turbidity (NTU)	Depth to water (feet)
			+/- 0.1 s.u.	+/- 10%	+/- 10 mV	(mS/cmc) +/- 3%	(°C) +/-3%	<10 NTU	(ieet)
0740	0.6	450	7.01	390	112.8	1.317	10.98	188	1.7)
6745	1.2	450	706	1.60	-209	1.335	11.58	9.7	1.73
0750	1.8	490	7.09	0.81	-621	1.376	11.89	3-8	1.73
0755	2.4	450	711	0.61	-76.9	1.399	1205	1.1	1.77
००४००	3,0	450	7.12	0.57	-82.5	1.411	12.08	0.2	173
0805	36	480	7.13	0.38	-900	1,419	12.15	0.0	173
0810	4.2	440	7.13	0.36	-94,4	1.421	12.27	00	1.77
0815	48	450	7.13	0.33	-983	1.418	12.27		1.70
0820			1000			7916	(2.07		1917 0
V 4 20	3-910	no ac							
								٠	
Date: 12/5	1,0			SAMPLING			6		
	•			Time: O					
Sample ID: $ heta$	m c -5	MW-	-15	Method of Sam		grab			
Analytical Parar	meters: (/	scr, Mn	Duplicate	U., E.	35				
			Duplicate	Duplicate Samp	ple ID: NA				
Q C. Parameter	s: NA								
Trash picked up	2 1	11	Well/locked?						
SIGNED/SAMP	LER:	1	U _A						
		17)						
		1							



Monitoring Well (KM Field Data Sheet - OMC Groundwater Site Well Number: < T-HW-85 Field Crew: 56 KW Purpose of Sampling: **OMC Quarterly Sampling** 28 35-75 Sonn Villade Site: OMC Field Conditions: WELL CONDITION Well Pad Acceptabl Not Acceptable Explain: Acceptable **Protective Casing** Not Acceptable Explain Well Casing Acceptable Not Acceptable Explain: Locking Cap Acceptable Not Acceptable Explain: Well Label (outside) Acceptable Not Acceptable Explain: Well Label (inside) Acceptable Not Acceptable Explain: Acceptable J-Plug Not Acceptable Explain **PURGE METHOD** Date: / 2/4/19 Time: 1300 Method: Total Well Depth (ft) 10.21 1.26 Depth to Water (ft): しら 8.95 Water Column (ft): Comments: **OBSERVATIONS** Odor: High , H2S , Fuel Like , Other: Comments: very turbid @ Start of Durge Middy orange color Specific ORP Volume DO Rate Temp Depth to water Time (s.u.) Conductance (mL/min) (ma/L) (oal) (mV) (°C) (NTU) (mS/cmc) +/- 10% +/- 10 mV ·/- 3% +/- 3% <10 NTU 754 1068 0.854 9.63 1305 0.5 350 -873 /13.4 1.38 0.784 7.24 0.42 9.70 1.0 0.728 9.71 7.22 350 0.27 -103.4 52.5 7.22 0.24 38.2 0.694 9.70 400 -114,6 1320 2.1 1.40 1.40 0.22 -113.3 0.656 9.82 25.0 1325 2.7 400 1.22 3.2 400 21.0 1330 722 0.70 -114,2 0.649 9.75 1.40 400 0-18 3.7 7.22 1.40 1335 -116.6 9.50 14.9 0.632 1340 4.3 400 7.22 0.17 -119,1 9.82 14.0 1.40 0.623 400 7.21 -118.6 4.8 0619 1.40 1345 9.78 11.0 0.15 -120.3 5.4 1350 400 9.92 7 27 6.14 0.613 27 1.40 -121.0 0.611 1.40 0 15 9.3 1355 6.0 400 7.21 9.86 **水. てこ** 8.5 -123,5 0.610 7.51 1400 400 0.12 1.40 SAMPLING Date: 12/4/19 KM 1405 Time: Sample ID: OMC-ST-MW-55 25 Method of Sample Collection: Analytical Parameters: VOCS, MNA, Diss Metals, Ouplicate Q.C. Sample Type: MS/MSD Duplicate Sample ID: 5 AME Q.C. Parameters: Purent AME as

Trash picked up? SIGNED/SAMPLER:

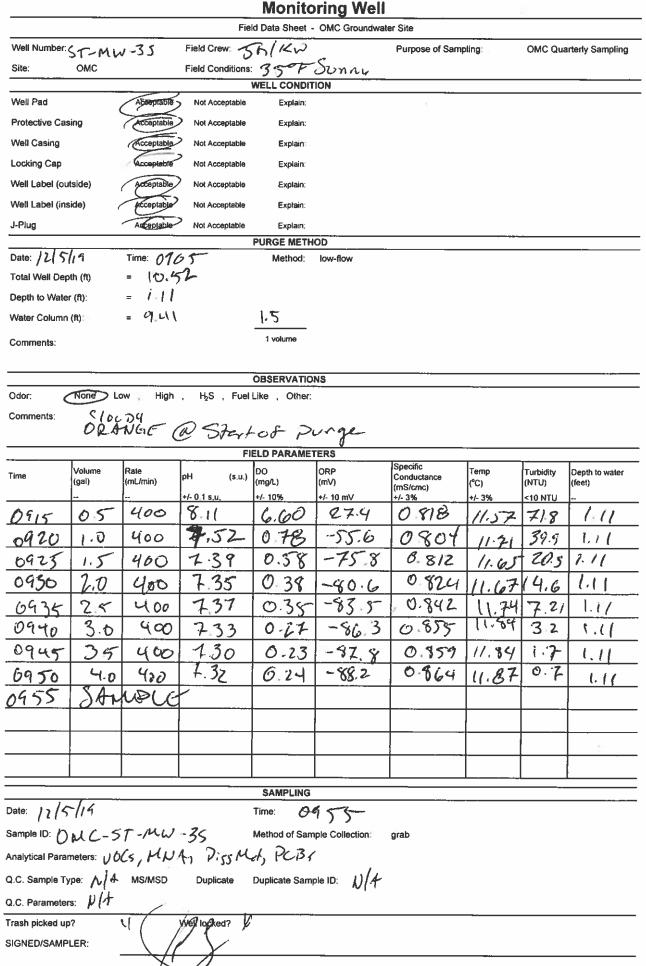
				Monito	ring Well				
	57-	<u>.</u>	Field	d Data Sheet	OMC Groundwate	er Site			
Well Number:	HW-C	12D	Field Crew: K.			Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	ОМС		Field Conditions:		sunny, hig	Lunds			
Well Pad		Acceptable		WELL CONDIT	TION ,				
Protective Cas	ina	Acceptable	Not Acceptable Not Acceptable	Explain:					
Well Casing	ang	Acceptable	Not Acceptable	Explain: Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (our	tside)	Acceptable	Not Acceptable	Explain:					
Well Label (ins	·	Acceptable	Not Acceptable	Explain:					
J-Plug	•	Acceptable	Not Acceptable	Explain:					
				PURGE METH	IOD				
Date: 12-5	1-19	Time: 12		Method:	low-flow				
Total Well Dep		= 22.19							
Depth to Water		= 1.26	•	2 U					
Water Column	(ft);	= 20.93	5	3.4					
Comments:				1 volume					
					NA				
Odor:	None . Lo	ow , High	•	OBSERVATIO Like , Other:	INS				
Comments:		· · · · · · · · · · · · · · · · · · ·	, 120 , 100,						
0	clear								
			FIE	ELD PARAME	TERS				
Time	Volume (gal)	Rate (mL/min)	pH (s.u.)	DO (mg/L)	ORP	Specific Conductance	Temp	Turbidity	Depth to water
	(gai) _		+/- 0.1 s,u,	+/- 10%	(mV) +/- 10 mV	(m\$/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
1305.	1	400	6.96	1.94	-13.0	1074	1228	97	1.43
1310		400	6.91	1.31	-55.3	1.075	12.34	61.7	1.43
1315		400	6.93	1.08	-82.8	1.101	12.43	41.4	1.43
1320		400	6.45	0.14	-42.1	1.113	12.39	31.6	1.43
1325		400	6.46	0.82	-102.0	1.123	12.32		1.43
1330		400	697	0.75	-105.6	1-122	12.45	14.1	1.43
335		400	6.97	0.72	-110.1	1079	12.52		1.43
1340		400	6.47	0.69	-1101	1102	12.49	7.6	1.43
345	1	400		0.65		1.129			
1350	~5.5	_	6.98				12.50		1.43
1730	1. 7.7	400	0.10	0.65	-116.1	1:121	12.57	3.8	1.43
						L			<u> </u>
		i.e		SAMPLING	_				
Date: 2 - 4	- 19 Kin)		Time: 135	52				
Sample ID: O	HC-MI	J OMC-	ST-MW-20	Method of San	nple Collection:	grab			
Analytical Parar	meters: PC	B5 , A	thalinity //	mions , 5	oulfide, dis	Solved me L.I.	TA		
Q.C. Sample Ty	/pe:	MS/MSD	Duplicate	Duplicate Sam	ple ID:	- v-v I-CIM()	, יטנ,	MEE	,0065
Q.C. Parameter	s: All	of abou	e						
Trash picked up			Well locked?		**				
SIGNED/SAMP	LER:	11	_						
		1							

- to	×	13		Monito	ring Well		n		ā
					OMC Groundwate	er Site			
Well Number;	ST-MI	N3D	Field Crew: /			Purpose of Samp	oling	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:						
Well Pad		Acceptable	Not Acceptable	WELL CONDIT	ION /			_	
Protective Cas	ina	Acceptable	Not Acceptable	Explain					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not Acceptable	Explain:					
Well Label (out	tside)	Acceptable	Not Acceptable						
Well Label (ins	·	Acceptable	Not Acceptable	Explain					
J-Plug	,	Acceptable	Not Acceptable	Explain					
(882)				PURGE METH	OD .				<u>.</u>
Date: 12/9	5/19	Time: 09		Method:	low-flow				
Total Well Dep	th (ft)	= 18.1	7-7511	in botton					
Depth to Water	53-53	- 110		~ ^					
Water Column	(ft):	= (7:7	.)	24					
Comments				1 volume					
						<u>. </u>			
Odor: (None Lo	ow . High		OBSERVATIO	NS				
61		ow High	. г _ъ о, гиен	Like , Other:					
Comments:	clear								
			FI	ELD PARAMET	ERS			**	
Time	Volume	Rate	ρH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity	Depth to water
	(gal)	(mL/min)	+/- 0.1 s,u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
19125	0.5	425	7110	3.44	54.6	1.445	1364	48.3	1.13
09+500	1.0	425	7.03	1.67	44.4	1.539	1350	254	1-14
0415	1.5	725	7.04	121	100	1.549	13.53	13.4	1.13
0930	20	425	7 2	1.08	-9.5	VC 133	1330	··· /	
	25		7.02		-28.2	1.551	13.50	150	1.13
0935		425		1.00		1.547	13.76	9.0	1214
0440	3.0	4L5	7.01	0-93	-494	1-546	13.80).19
0945	3.5	4125	7.02	0-88	- 59.6	1.552	13.78		1.19
0950	4.0	425	7.06	0.84	-67.2	1.547	1384		1.14
0955	4.5	425	7.03	0.81	- 73.9	1,545	13.87	6.7	1-14
1000	5.0	425	7.04	0.79	-78:1	1.544	13.86		1.14
1005	5.5	425	7.01	0.78	-813	1533	13.79		1.14
				SAMPLING	· · · · · · · · · · · · · · · · · · ·	J		<u> </u>	
Date: 12 - 5	5-19			Time: [O (06				
Sample ID: ()		t. Mi i i		Method of Sam	-	grab			
					-	-	to Jan	1	مارة
O C Ca					olved metal	12 FOCT WE	: c, voc	1 3417	
Q.C. Sample Ty	100	M9/MSD	Dupileate	Duplicate Cam j	70-41				
Q.C. Parameter	s: NA								

Trash picked up?

SIGNED/SAMPLER:

Well locked?



			Fie	ld Data Sheet -	OMC Groundwate	er Site			
Well Numbe	55-MY	v · 45	Field Crew: L.	SCHARC	H	Purpose of Samp	pling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions	YUNNE	300F				
				WELL CONDIT					
Well Pad		Adceptable	Not Acceptable	Explain:		· <u>-</u> -			***
Protective C	asing	Acceptable	Not Acceptable	Explain:					
Vell Casing		Acceptable	Not Acceptable	Explain:					
ocking Cap)	Acceptable	Not Acceptable	Explain:	Does NOT	LOUR			
Vell Label (d	outside)	Acceptable	Not Acceptable	Explain:					
Vell Label (i	nside)	Acceptable	Not Acceptable	Explain:					
I-Plug	•	Acceptable	Not Acceptable	Explain:	er an coma	N (mm		·	
				PURGE METH	J-Plus C	BSTKUU:	rull -	SKAL	•
ate:		Time: ()	22	Method	low-flow				_
otal Well D	epth (ft)	= 11.70	23						
epth to Wa	ter (ft):	= 2 51	1						
· Vater Colum	-82	= (1)	<i>y</i> 2	1.5					
	((14.	J	1 volume					
comments:				1 Volume					
		Ow), High		OBSERVATIO Like Other:	NS				
			9-47						
Comments:	Volume	O UNTIL	9-47	ELD PARAMET	TERS ORP	Specific Conductance	Temp	Turbidity	Depth to water
Comments:	TURBIL	J UNTIL	- 9-47 FH (s.u.)	ELD PARAMET DO (mg/L)	ORP (mV)	Conductance (mS/cmc)	(°C)	(NTU)	Depth to water (feet)
Comments:	Volume	Rate (mL/min)	9:47 FI pH (s.u.)	ELD PARAMET DO (mg/L) +/- 10%	ORP (mV) +/- 10 mV	Conductance (mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
Comments:	Volume	Ráte (mL/min)	PH (s.u.)	ELD PARAMET DO (mg/L) +/- 10%	ORP (mV) +1-10 mV	Conductance (mS/cmc) +/- 3%	(°C) +/- 3% 11, BY	(NTU) <10 NTU 46.6	
Comments:	Volume	Ráte (mL/min) - 250 250	9:47 PH (s.u.) +1-0.1 s.u. 7:101	ELD PARAMET DO (mg/L) +/- 10% 1,87	ORP (mV) +/-10 mV 214.9 225.2	Conductance (mS/cmc) +/-3% /-487 /-70 (11.84 11.78	(NTU) <10 NTU 46.6 19.1	(feet)
1:35 1:40	Volume	Rate (mL/min) - 250 250	9:47 PH (s.u.) 7:101 7:48 7:42	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83	ORP (mV) +1-10 mV 214.9 225.2 226.7	Conductance (mS/cmc) +1-3% 1,497 1,70((°C) +/- 3% 11, BY	(NTU) <10 NTU 46.6	(feet)
1:35 1:40	Volume	Rate (mL/min) - 250 250 250	9:47 PH (s.u.) +1-0.1 s.u. 7:101	ELD PARAMET DO (mg/L) +/- 10% 1,87	ORP (mV) +/-10 mV 214.9 225.2	Conductance (mS/cmc) +1-3% 1,497 1,70(11.84 11.78	(NTU) <10 NTU 46.6 19.1 13.9	2.Q1
1:35 1:40	Volume (gal)	Rate (mL/min) - 250 250 250	9:47 PH (s.u.) 7:101 7:48 7:42	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67	ERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.7	Conductance (mS/cmc) +/-3* 1,432 1,701 1,706 1,772	11.84 11.78 11.90	(NTU) <10 NTU 46.6 19.1 13.9	2.61 2.61 2.61 2.61
ime 1:35 1:40 1:50 1:55	Volume (gal)	Rate (mL/min) - 250 - 250 - 250 - 250	9:47 PH (s.u.) 7:101 7:49 7:42 7:40 7:40	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67 0,167	PERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.9 226.6	Conductance (mS/cmc) +1-3% 1, USZ 1, 70(1, 70(1, 71Z 1, 71Y	11.99 11.90 11.90 11.90 11.98	(NTU) <10 NTU 46.6 19.1 13.9 7.6 4.6	2.61 2.61 2.61 2.61 2.61
1:35 1:40 1:45 1:55 0:00	Volume (gal)	Rate (mL/min) 250 250 250 250 250	9:47 PH (s.u.) 7:101 7:101 7:49 7:40 7:40 7:40 7:40 7:40	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67	PERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.9 226.6	Conductance (mS/cmc) +/-3* 1,432 1,701 1,706 1,772	11.84 11.78 11.90 11.78	(NTU) <10 NTU 46.6 19.1 13.9 7.6 4.6	2.61 2.61 2.61 2.61 2.61
1:35 1:40 1:45 1:55	Volume (gal)	Rate (mL/min) - 250 - 250 - 250 - 250	9:47 PH (s.u.) 7:101 7:101 7:49 7:40 7:40 7:40 7:40 7:40	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67 0,167	PERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.9 226.6	Conductance (mS/cmc) +1-3% 1, USZ 1, 70(1, 70(1, 71Z 1, 71Y	11.99 11.90 11.90 11.90 11.98	(NTU) <10 NTU 46.6 19.1 13.9 7.6 4.6	2.61 2.61 2.61 2.61 2.61
1:35 1:40 1:45 1:55	Volume (gal)	Rate (mL/min) 250 250 250 250 250	9:47 PH (s.u.) 7:101 7:101 7:49 7:40 7:40 7:40 7:40 7:40	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67 0,167	PERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.9 226.6	Conductance (mS/cmc) +1-3% 1, USZ 1, 70(1, 70(1, 71Z 1, 71Y	11.99 11.90 11.90 11.90 11.98	(NTU) <10 NTU 46.6 19.1 13.9 7.6 4.6	2.61 2.61 2.61 2.61 2.61
1:35 1:40 1:45 1:55	Volume (gal)	Rate (mL/min) 250 250 250 250 250	9:47 PH (s.u.) 7:101 7:101 7:49 7:40 7:40 7:40 7:40 7:40	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67 0,167	PERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.9 226.6	Conductance (mS/cmc) +1-3% 1, USZ 1, 70(1, 70(1, 71Z 1, 71Y	11.99 11.90 11.90 11.90 11.98	(NTU) <10 NTU 46.6 19.1 13.9 7.6 4.6	2.61 2.61 2.61 2.61
1:35 1:40 1:45 1:55 0:00	Volume (gal)	Rate (mL/min) 250 250 250 250 250	9:47 PH (s.u.) 7:101 7:101 7:49 7:40 7:40 7:40 7:40 7:40	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67 0,167	PERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.9 226.6	Conductance (mS/cmc) +1-3% 1, USZ 1, 70(1, 70(1, 71Z 1, 71Y	11.99 11.90 11.90 11.90 11.98	(NTU) <10 NTU 46.6 19.1 13.9 7.6 4.6	2.61 2.61 2.61 2.61 2.61
1:35 1:40	Volume (gal)	Rate (mL/min) 250 250 250 250 250	9:47 PH (s.u.) 7:101 7:101 7:49 7:40 7:40 7:40 7:40 7:40	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67 0,167	PERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.9 226.6	Conductance (mS/cmc) +1-3% 1, USZ 1, 70(1, 70(1, 71Z 1, 71Y	11.99 11.90 11.90 11.90 11.98	(NTU) <10 NTU 46.6 19.1 13.9 7.6 4.6	2.61 2.61 2.61 2.61 2.61
1:35 1:40 1:45 1:55 0:00	Volume (gal)	Rate (mL/min) 250 250 250 250 250	9:47 PH (s.u.) 7:101 7:101 7:49 7:40 7:40 7:40 7:40 7:40	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67 0,167	PERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.9 226.6	Conductance (mS/cmc) +1-3% 1, USZ 1, 70(1, 70(1, 71Z 1, 71Y	11.99 11.90 11.90 11.90 11.98	(NTU) <10 NTU 46.6 19.1 13.9 7.6 4.6	2.61 2.61 2.61 2.61 2.61
1:35 1:40 1:45 1:55	Volume (gal)	Rate (mL/min) 250 250 250 250 250	9:47 PH (s.u.) 7:101 7:101 7:49 7:40 7:40 7:40 7:40 7:40	ELD PARAMET DO (mg/L) +/- 10% 1,87 1,23 0,83 0,67 0,167	PERS ORP (mV) +1-10 mV 214.9 225.2 226.7 226.9 226.6	Conductance (mS/cmc) +1-3% 1, USZ 1, 70(1, 70(1, 71Z 1, 71Y	11.99 11.90 11.90 11.90 11.98	(NTU) <10 NTU 46.6 19.1 13.9 7.6 4.6	2.61 2.61 2.61 2.61 2.61

Analytical Parameters: VDCS, Metals, MNA, PCBS
Q.C. Sample Type: V/A MS/MSD Duplicate Duplicate Sample ID: N/A

Q.C. Parameters: NIA

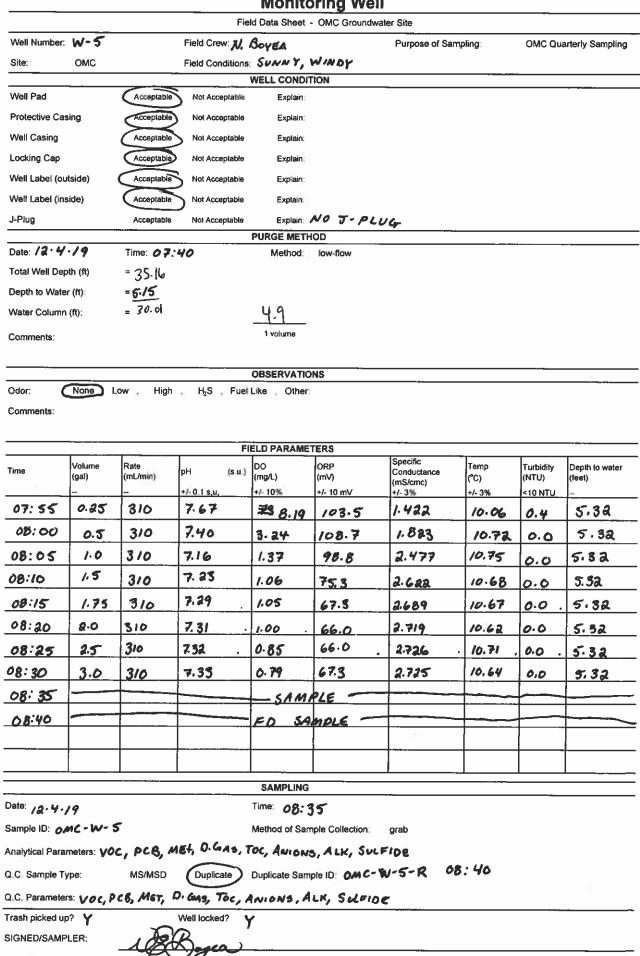
Trash picked up?
SIGNED/SAMPLER:

					ring Well OMC Groundwat	or Cito		
Well Numbe	r ST-M	W-4D	Field Crew:		- ONC Gloundwar	Purpose of Sam	plina:	OMC Quarterly Sampling
Site:	OMC		Field Conditions	350	MNU		r	ome qualitary duriphing
				WELL CONDIT		<u>. </u>		
Well Pad		Acceptable	Not Acceptable	Explain				py 10+2
Protective C	asing	Acceptable	Not Acceptable	Explain:				P. Co
Well Casing		acceptable	Not Acceptable	Explain:				
Locking Cap	•	Acceptable	Not Acceptable	Explain:	-> iplu	gs obstrui	et total	seal
Well Label (outside)	Acceptable	Not Acceptable	Explain:	۷' ,) 000111	10.001	<i>3.</i> 30
Well Label (i	nside)	Acceptable	Not Acceptable	Explain;				
J-Plug		Acceptable	Not Acceptable	Explain;				
210	2= -1	4.=1 4.=		PURGE METH				
		/9Time: 09		Method:	low-flow			
Total Well D		= 20.8	3					
Depth to Wa	. ,	= <u>a.55</u>	<u> </u>	3.0				
Water Colum	ит (п.):	= 18.29)					
Comments:				1 volume				
				OBCES!!	NIC			
Odor: /	None	Low , High	, H₂S , Fuel	OBSERVATIO	no			
Comments:	stight	1		1	د ملي ا			
	2119111	y yellow	n m/ Niv	יט <i>א</i> טך אי)	idity			
			F	ELD PARAME	TERS			
Time	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Temp	Turbidity Depth to water
	(gal)	(mL/min) 	+/- 0.1 s.u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) (feet)
0935		250	8.59	10.12	-26.4	0.160	1257	42.1 3.33
1940		250	8.51	8.39	-48	0.178	12.88	112.3 3.38
11945		250	8:30	6.36	-0.2	0.160	13.32	119.6 3.38
0 10			10.00	W. 20	1 0. 6	1016	12.24	111 (10)
AGSA	-	Fo	hatied =	والمساد والما	201-6	1 1 22	1.1	
0450		2 En	noticed F		rough ce	11 to Ch		Noidity -
0950		2 En	8.21	437	5.2	11 to Ch	13.56	125.2 3.50
0955		200	8-21	4.37	5.2 9.0	0,295 0,349	13.56	Noid ty 125.2 3.50
		200 200	8.21	4-37 3.79 6.85	5.2 9.0 7.0	11 to Ch	13.56	125.2 3.50 101.3 3.50 24.2 3.63
0955		200	8-21	4.37	5.2 9.0	0,295 0,349	13.56	Noid ty 125.2 3.50
0955 1000 1005		200 200 200	8.21	4-37 3.79 6.85	5.2 9.0 7.0 18.4	0,295 0,349 0,194 0,374	13.56 13.60 12.72 13.12	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49
1000		200 200 200 200	8.21 8.12 8.20 8.05 7.96	4.37 9.79 6.85 4.30	5.2 9.0 7.0	0.295 0.349 0.194 0.374 0.574	13.56 13.60 12.72 13.12	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49
0955 1000 1005 1015		200 200 200 200 200 200	8.21 8.12 8.20 8.05 7.96 7.87	4.37 9.79 6.85 4.30 2.10 1.94	5.2 9.0 7.0 18.4 18.4	0,295 0,349 0,194 0,374 0,574 0,597	13.56 13.60 12.72 13.12 13.27 13.46	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49
0955 1000 1005 1015 1015 1020		200 200 200 200 200 200 200	8.21 8.12 8.20 8.05 7.96 7.87 7.87	4.37 9.79 6.85 4.30 2.10 1.94 1.80	5.2 9.0 7.0 18.4 18.4 21.2 21.0	0,295 0,349 0,349 0,374 0,374 0,574 0,597	13.56 13.60 12.72 13.12 13.27 13.46 13.57	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49
0955 1000 1005 1015		200 200 200 200 200 200	8.21 8.12 8.20 8.05 7.96 7.87	4.37 9.79 6.85 4.30 2.10 1.94 1.80 1.72	5.2 9.0 7.0 18.4 18.4	0,295 0,349 0,194 0,374 0,574 0,597	13.56 13.60 12.72 13.12 13.27 13.46	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49
0955 1000 1005 1040 1015 1020 1025	7.70	200 200 200 200 200 200 200	8.21 8.12 8.20 8.05 7.96 7.87 7.87	4.37 9.79 6.85 4.30 2.10 1.94 1.80 1.72 SAMPLING	5.2 9.0 1.0 18.4 18.4 21.2 21.0 20.8	0,295 0,349 0,349 0,374 0,374 0,574 0,597	13.56 13.60 12.72 13.12 13.27 13.46 13.57	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49
0955 1000 1005 1015 1020 1025		200 200 200 200 200 200 200 200	8.21 8.12 8.20 8.05 7.96 7.87 7.87 7.82	4.37 9.79 6.85 4.30 2.10 1.94 1.80 1.72 SAMPLING Time: 104	5.2 9.0 7.0 18.4 18.4 21.2 21.0 20.8	0,295 0,349 0,374 0,374 0,574 0,597 0,687 0,732	13.56 13.60 12.72 13.12 13.27 13.46 13.57	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49
0955 1000 1005 1015 1020 1025 Date: \2/	MC-57	200 200 200 200 200 200 200	8.21 8.12 8.20 8.05 7.96 7.87 7.82 7.82	4.37 9.79 6.85 4.30 2.10 1.94 1.80 1.72 SAMPLING Time: 104 Method of Sam	5.2 9.0 7.0 18.4 18.4 21.2 21.0 20.8	0,295 0,349 0,349 0,374 0,374 0,574 0,597	13.56 13.60 12.72 13.12 13.27 13.46 13.57	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49
0955 1000 1005 1005 1005 1005 1025 Date: \Z/Sample ID: (Analytical Par)MÛ-ST ameters: \	200 200 200 200 200 200 200 200 -MW-4	8.21 8.20 8.20 8.05 7.96 7.87 7.82 7.82	4.37 9.79 6.85 4.30 2.10 1.94 1.80 1.72 SAMPLING Time: 104 Method of Sam (Metal.)	5.2 9.0 7.0 18.4 18.4 21.2 21.0 20.8	0,295 0,349 0,374 0,374 0,574 0,597 0,687 0,732	13.56 13.60 12.72 13.12 13.27 13.46 13.57	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49
0955 1000 1005 1015 1020 1025 Date: \2/)MÛ-ST ameters: \	200 200 200 200 200 200 200 200 -MW-4	8.21 8.20 8.20 8.05 7.96 7.87 7.82 7.82	4.37 9.79 6.85 4.30 2.10 1.94 1.80 1.72 SAMPLING Time: 104 Method of Sam (Metal.)	5.2 9.0 7.0 18.4 18.4 21.2 21.0 20.8	0,295 0,349 0,374 0,374 0,574 0,597 0,687 0,732	13.56 13.60 12.72 13.12 13.27 13.46 13.57	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49
0955 1000 1005 1005 1005 1005 1025 Date: \Z/Sample ID: (Analytical Par)MC-S7 ameters: \ Type: N/A	200 200 200 200 200 200 200 200 200 200	8.21 8.20 8.20 8.05 7.96 7.87 7.82 7.82	4.37 9.79 6.85 4.30 2.10 1.94 1.80 1.72 SAMPLING Time: 104 Method of Sam (Metal.)	5.2 9.0 7.0 18.4 18.4 21.2 21.0 20.8	0,295 0,349 0,374 0,374 0,574 0,597 0,687 0,732	13.56 13.60 12.72 13.12 13.27 13.46 13.57	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49
0955 1000 1005 1005 1005 1020 1025 Date: \Z/ Sample ID: (Analytical Par)MC-ST ameters: \ Type: N/A ers: N/L	200 200 200 200 200 200 200 200 200 200	8.21 8.20 8.20 8.05 7.96 7.87 7.82 7.82	4.37 9.79 6.85 4.30 2.10 1.94 1.80 1.72 SAMPLING Time: 104 Method of Sam (Metal.)	5.2 9.0 7.0 18.4 18.4 21.2 21.0 20.8	0,295 0,349 0,374 0,374 0,574 0,597 0,687 0,732	13.56 13.60 12.72 13.12 13.27 13.46 13.57	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49
0955 1000 1005 1005 1005 1005 1000 1005 1000 1)MC-ST rameters: \ Type: N/A ers: N/A	200 200 200 200 200 200 200 200 200 200	8.21 8.20 8.05 7.96 7.87 7.87 7.82 7.82	4.37 9.79 6.85 4.30 2.10 1.94 1.80 1.72 SAMPLING Time: 104 Method of Sam Metad	5.2 9.0 7.0 18.4 18.4 21.2 21.0 20.8	0,295 0,349 0,374 0,374 0,574 0,597 0,687 0,732	13.56 13.60 12.72 13.12 13.27 13.46 13.57	125.2 3.50 101.3 3.50 24.2 3.53 24.1 3.49 18.1 3.49 14.5 3.49 1.7 3.49

				1.5						—
Well Number:	ST-M	W-461		eld Data Sheet	- OMC Grounds	water Site Purpose of Samp	olina:	OMC Oue	rterly Sampling	
Site:	OMC	(10)	Field Conditions	·	unny	r alpose or gamp	,ıg.	OMO Que	incompany	•
			, ioia Conaniona	WELL CONDIT						—
Well Pad		Acceptable	Not Acceptable	Explain:		1 2	[2]			_
Protective Ca	sing	Acceptable	Not Acceptable	Explain:		pg 20	141			
Well Casing		Acceptable	Not Acceptable	Explain:		11				
Locking Cap		Acceptable	Not Acceptable	Explain:						
Well Label (or	utside)	Acceptable	Not Acceptable	Explain:	Cio	cail				
Well Label (in	side)	Acceptable	Not Acceptable	Explain:	200	P3-1				
J-Plug		Acceptable	Not Acceptable	Explain:						
				PURGE METH	IOD					_
Date:		Time:		Method:	low-flow					
Total Well De	pth (ft)	=								
Depth to Wate	er (ft):	=				See Pol				
Water Column	n (ft):	=				256 b.J.	ı			
Comments:				1 volume						
				OBSERVATIO						_
Odor:	None ,	Low , High	, H ₂ S , Fue	Like , Other:		= (, 0, r	4			
Comments:						See F	$\mathcal{I}_{\mathcal{I}}$			
				IEI D DADAME	TEDE					
	Volume	Rate		DO DO	ORP	Specific	Temp	Turbidity	Depth to water	—
Time	(gal)	(mL/min)	ρH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)	
1030	1	260	7.76	1-72	+/- 10 mV	0.746	+/- 3%	<10 NTU	3.49	-
			7.75	1.72		-	13.47	10		_
1035	N2	2 9 0	1771	1.76	22.3	0.756	13.54	6.3	3.49	T0
1040	[Carrent						<u> </u>	amp	ed a	10
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		<u></u>	<u></u>	<u></u>			<u></u>			
				SAMPLING						_
Pate:		·- <u>·</u>		Time:				1		-
					nnie Cellantia		C40 0			
ample ID:				Method of Sar	nple Collection:	grab	See P	2.1		
nalytical Para	ameters:									
C.C. Sample T	ype:	MS/MSD	Duplicate	Duplicate Sam	ple ID:					
.C. Paramete	ers:									
rash picked u	ıp?	· · · ·	Well locked?							_
IGNED/SAMI	PI FR:									

				Wonite	ring well		\$2		23
			Fie	ld Data Sheet -	OMC Groundwat	er Site			
Well Number:	ST-MI	W-5S	Field Crew: L	SCHARG	4	Purpose of Samp	oling:	OMC Qua	rterly Sampling
Site:	OMC		Field Conditions:	SUNNY	/PARTLY	cloudy	41°F		
		- (S)		WELL CONDIT	IÓN				
Well Pad		Acceptable	Not Acceptable	Explain:					
Protective Cas	sing	Acceptable	Not Acceptable	Explain;					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		Acceptable	Not accepteble	Explain:	No LOC	v-			
Well Label (out	itside)	Acceptable	Not Acceptable	Explain:					
Well Labe (ins	side)	Agceptable	Not Acceptable	Explain:					
J-Plug		Agreptable	Not Acceptable	Explain:					
				PURGE METH	IOD				
Date: 12/4	1/19	Time: / 2:	53	Method:	low-flow				
Total Well Dep	oth (ft)	= 14,1	9						
Depth to Water	r (ft):	= 3-3 3.	29(Km)						
Water Column	(ft):	= 10,0	1	8.1					
Comments:		- 1	•	1 volume					
		^		OBSERVATIO	NS				
Odor:	None , (bw), High	, H₂S , Fuel	Like , Other:					
Comments:	BLACK		DIECEC	M OA	In valore	P			
;	DUNGL	· > C()	LIECE?	IN GKO	MWT WILL	r through	गमण्य	AMDL	INU
			FI	ELD PARAME	TERS				
Time	Volume	Rate	pH (s.u.)	DO	ORP	Specific Conductance	Тетр	Turbidity	Depth to water
	(gal)	(mL/min)	+/- 0.1 s _i u,	(mg/L) +/- 10%	(mV) +/- 10 mV	(mS/cmc) +/- 3%	(°C) +/- 3%	(NTU) <10 NTU	(feet)
12:55	11	200	7 37	1.81	94.3	0.875	12.12	14.6	3.35
		220	7.71	10 00	201	D 0112	1	, ,	1-5
13:00	╁┈╫┈	220	+. 6	0.00	99,1	0.892	11.58	11.0	3,35
13:05		220	7.18	0.51	85.6	0.835	11.64	8.5	3,35
13:10	1	220	7.14	0,53	84,0	0.833	11.70	7.7	3.35
13:15	N3	220	7.12	0.42	82.8	0.829	11.60	10,3	3,35
13:20			EOC13						
10.00	 	7111111		-0		<u> </u>	\vdash		
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	L			J	<u> </u>		l	L,	l
	1,11			SAMPLING					
Date: 17/	14120	017	Â	Time: /3	20				
	SMC	MW-	5		nple Collection:	grab			
Analytical Para	meters:	ST-M	W-55	in pro	2,				
Q.C. Sample Ty	ype: kl/n	UCS, IVV	W-5S Hall, MA Duplicate	Duplicate Sam	ple ID: NI/D				
Q.C. Parameter			•		talla.				
	1916	1	Mail Innhalia 14	,					
Trash picked up	,	Wa.	Well locked?	۵					
SIGNED/SAMP	LEK!	XUCA	She	vick					
		V	X						

		· · · -		Monito	ring Well				
			Fiel	d Data Sheet -	OMC Groundwate	er Site			
Well Number:	MST-	MW-5D	Field Crew: K	Ma		Purpose of Samp	ling:	OMC Qua	arterly Sampling
Site:	OMC		Field Conditions:	40.E	Windy				
		<u>-</u> .	1	WELL CONDIT					
Well Pad		Acceptable	Not Acceptable	Explain:	NIA				
Protective Cas	sing (Acceptable	Not Acceptable	Explain:					
Well Casing		Acceptable	Not Acceptable	Explain:					
Locking Cap		cceptable	Not Acceptable	Explain:					
Well Label (out	tside)	Acceptable	Not Acceptable	Explain:					
Well Label (ins	side)	Acceptable	Not Acceptable	Explain:					
J-Plug		Acceptable	Not Acceptable	Explain:					
51 1-11				PURGE METH					
Date: 2/4	119		45	Method:	low-flow				
Total Well Dep		= 25.4)						
Depth to Water		= 3,52	_	3.6					
Water Column	(ft):	= 21.93	3	<u> </u>					
Comments:				1 volume					
Oden	(Name)	au Dieb		OBSERVATIO	NS				
Odor:	None . L	ow , High	, H ₂ S , Fuel	Like , Other:					
Comments:	Clea	\checkmark							
			Ett	ELD PARAMET	EDE				
	Volume	Rate	1	DO	ORP	Specific	Temp	Turbidity	Depth to water
Time	(gal)	(mL/min)	pH (s.u.)	(mg/L)	(mV)	Conductance (mS/cmc)	(°C)	(NTU)	(feet)
1250		300	+/- 0.1 s,u,	2.27	-92.8	1.955	H-02	<10 NTU	221
			1.48	 	- 100 -	1		 	3.32
1255	 	300	4,9+	1.75	~131.7	1.595	13,94	0	3.30
1300		300	4.44	1.54	-1376	1.433	14.16	0	3.30
1305		300	7.47	1.48	-139.0	1.421	1416	0	3.30
1310	1.17	300	7.46	1.33	-142.9	1.426	14.26	0	3.30
1315	W	300	746	1.32	-1424	1-429	14-22		3.30
1320	N4	300	7.46	1.30	-142.0	1-437	14-20	0	3.30
1020			10	 	112.0		11:00		7.00
		Sampl	ed @	1325					7.5
				1					
				216	2.0				
				6.5	177				
					N.				
				SAMPLING					
Date: 12/4	+ /19			Time: 132	5				
Sample ID:		T - km, l		Method of Sam		grab			
					_	g			
Analytical Paral	meters. V		dissolved						
Q.C. Sample Ty	Abe: N/V	MS/MSD	Duplicate	Duplicate Sam	ple ID: N/A				
Q.C. Parameter	<u> </u>	1							
Trash picked up	35 A		Well locked?	4					
SIGNED/SAMP	LER:		1/, 1	à					
		-	4 WVI	V W					



Attachment 2 Data Usability Evaluation



Data Usability Evaluation—December 2019 OMC Plant 2 Site (OU4), Waukegan, Illinois WA No. 237-RARA-0528, Contract No. EP-S5-06-01

PREPARED FOR: U.S. Environmental Protection Agency (EPA)

PREPARED BY: Nichole Boyea/CH2M HILL, Inc. (CH2M)

DATE: April 3, 2020

This memorandum presents the results of the data usability evaluation of groundwater data from the Outboard Marine Corporation (OMC) Plant 2 Site in Waukegan, Illinois. Groundwater samples were collected December 2 through 6, 2019, and analyzed by either the subcontract laboratory, Katahdin Analytical, or a laboratory in EPA's Contract Laboratory Program (CLP). The analytical results will be used to evaluate the performance of in situ treatment of the remining high-concentration source areas and the sitewide monitored natural attenuation remedy.

- Eighty-two aqueous samples, including quality assurance (QA)/quality control (QC) samples (7 field duplicates [FDs], 4 matrix spikes [MSs], 4 matrix spike duplicates [MSDs], 2 trip blanks [TBs], 1 equipment blank [EB], and 1 field blank [FB]) were analyzed for volatile organic compounds (VOCs).
- Eighty aqueous samples, including QA/QC samples (7 FDs, 4 MSs, 4 MSDs, 1 EB, and 1 FB) were analyzed for dissolved metals.
- Thirty aqueous samples, including QA/QC samples (2 FDs, 2 MSs, 2 MSDs, 1 EB, and 1 FB) were analyzed for polychlorinated biphenyl (PCB) Aroclors.
- Eighty samples were analyzed for monitored natural attenuation (MNA) parameters (alkalinity, anions [chloride, nitrate, nitrite, sulfate], sulfide, dissolved gases [methane, ethane, ethene], and total organic carbon [TOC]), including QA/QC samples (7 FDs, 4 MSs, 4 MSDs, 1 EB, and 1 FB).

Table 1 lists the parameters, methods, and the laboratory performing the analysis.

Table 1. Analytical Parameters

Data Usability Evaluation—December 2019 OMC Plant 2 Site (OU4), Waukegan, Illinois

Parameter Class	Method	Laboratory Type	Laboratory
VOCs	CLP SOW SOM02.4	CLP Lab	Shealy Environmental Services
PCB Aroclors	CLP SOW SOM02.4	CLP Lab	West Columbia, South Carolina
Dissolved Metals (Arsenic, Iron, Manganese)	CLP SOW ISM02.4	CLP Lab	Chemtex Port Arthur, Texas
Alkalinity	SM 2320B	Subcontract Lab	
Anions (Chloride, Nitrate, Nitrite, Sulfate)	EPA 300.0	Subcontract Lab	
Sulfide	SW 846 9034	Subcontract Lab	Katahdin Analytical Services Scarborough, Maine
Dissolved Gases (Methane, Ethane, Ethene)	RSK175	Subcontract Lab	Scarborough, Manie
тос	SW846 9060	Subcontract Lab	

DATA USABILITY EVALUATION—DECEMBER 2019 OMC PLANT 2 SITE (OU4), WAUKEGAN, ILLINOIS WA NO. 237-RARA-0528, CONTRACT NO. EP-S5-06-01

As part of the QA process outlined in the site-specific quality assurance project plan (QAPP) (CH2M 2013), QAPP Addendum II (CH2M 2017), and QAPP Addendum III (CH2M 2019), QC samples were collected in the field to complement the assessment of overall data quality and usability. The QC samples consisted of FDs, aliquots for laboratory MS/MSD, FB, EB, and VOC TB samples. Table 2 presents the sample delivery groups (SDGs), sample identifications (IDs), and station locations.

Table 2. Sample Summary by SDG and Sample ID
Data Usability Evaluation - December 2019
OMC Plant 2 Site (OU4), Waukegan, Illinois

		CLP Organics		CLP Ino	rganics			Subcontract MNA	ontract MNA		
Well ID	CLP#	VOC SDG	PCB SDG	CLP#	Metals SDG	SAS#	Alkalinity, Anions SDG	Sulfide SDG	TOC SDG	Dissolved Gases SDG	
OMC-EB-120319	ETFN2	ETFF5	ETFF5	METFN2	METFG8	20CO01-71	TM2704	TM2704	TM2704	TM2704	
OMC-FB-120319	ETFN3	ETFF5	ETFF5	METFN3	METFG8	20CO01-72	TM2704	TM2704	TM2704	TM2704	
OMC-MW-11D	ETFF2	ETFF5	-	METFF2	METFF2	20CO01-01	TM2704	TM2704	TM2704	TM2704	
OMC-MW-11D-R	ETFF3	ETFF5	-	METFF3	METFF2	20CO01-02	TM2704	TM2704	TM2704	TM2704	
OMC-MW-11S	ETFF4	ETFF5	-	METFF4	METFF2	20CO01-03	TM2704	TM2704	TM2704	TM2704	
OMC-MW-3D	ETFF5	ETFF5	ETFF5	METFF5	METFF2	20CO01-04	TM2704	TM2704	TM2704	TM2704	
OMC-MW-3S	ETFF6	ETFF5	-	METFF6	METFF2	20CO01-05	TM2704	TM2704	TM2704	TM2704	
OMC-MW-501D	ETFF7	ETFF5	ETFF5	METFF7	METFF2	20CO01-06	TM2704	TM2704	TM2704	TM2704	
OMC-MW-501S	ETFF8	ETFF5	ETFF5	METFF8	METFF2	20CO01-07	TM2704	TM2704	TM2704	TM2704	
OMC-MW-513D	ETFF9	ETFF5	-	METFF9	METFF2	20CO01-08	TM2704	TM2704	TM2704	TM2704	
OMC-MW-513S	ETFG0	ETFF5	-	METFG0	METFF2	20CO01-09	TM2704	TM2704	TM2704	TM2704	
OMC-MW-516D	ETFG1	ETFF5	-	METFG1	METFF2	20CO01-10	TM2661	TM2704	TM2704	TM2704	
OMC-MW-516S	ETFG2	ETFF5	-	METFG2	METFF2	20CO01-11	TM2661	TM2704	TM2704	TM2704	
OMC-MW-528D	ETFG3	ETFG3	-	METFG3	METFG3	20CO01-12	TM2769	TM2769	TM2769	TM2769	
OMC-MW-528S	ETFG4	ETFG3	-	METFG4	METFG3	20CO01-13	TM2769	TM2769	TM2769	TM2769	
OMC-MW-600D	ETFG5	ETFM1	-	METFG5	METFM1	20CO01-14	TM2892	TM2892	TM2892	TM2892	
OMC-MW-600S	ETFG6	ETFM1	-	METFG6	METFM1	20CO01-15	TM2892	TM2892	TM2892	TM2892	
OMC-MW-601D	ETFG7	ETFG3	-	METFG7	METFF2	20CO01-16	TM2661	TM2704	TM2704	TM2704	
OMC-MW-601S	ETFG8	ETFG3	-	METFG8	METFG8	20CO01-17	TM2661	TM2704	TM2704	TM2704	
OMC-MW-602D	ETFG9	ETFG3	-	METFG9	METFG3	20CO01-18	TM2769	TM2769	TM2769	TM2769	
OMC-MW-602D-R	ETFH0	ETFG3	-	METFH0	METFG3	20CO01-19	TM2769	TM2769	TM2769	TM2769	

DATA USABILITY EVALUATION—DECEMBER 2019 OMC PLANT 2 SITE (OU4), WAUKEGAN, ILLINOIS WA NO. 237-RARA-0528, CONTRACT NO. EP-S5-06-01

Table 2. Sample Summary by SDG and Sample ID
Data Usability Evaluation - December 2019
OMC Plant 2 Site (OU4), Waukegan, Illinois

	(CLP Organics		CLP Inc	rganics		Subcontract MNA			
Well ID	CLP#	VOC SDG	PCB SDG	CLP#	Metals SDG	SAS #	Alkalinity, Anions SDG	Sulfide SDG	TOC SDG	Dissolved Gases SDG
OMC-MW-602S	ETFH1	ETFG3	-	METFH1	METFG3	20CO01-20	TM2769	TM2769	TM2769	TM2769
OMC-MW-603D	ETFH2	ETFM1	-	METFH2	METFG8	20CO01-21	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-603S	ETFH3	ETFM1	-	METFH3	METFG8	20CO01-22	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-604D	ETFH4	ETFM1	-	METFH4	METFG8	20CO01-23	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-604S	ETFH5	ETFM1	-	METFH5	METFG8	20CO01-24	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-605D	ETFH6	ETFM1	-	METFH6	METFG8	20CO01-25	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-605D-R	ETFH7	ETFM1	-	METFH7	METFG8	20CO01-26	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-605S	ETFH8	ETFM1	-	METFH8	METFG8	20CO01-27	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-606D	ETFH9	ETFM1	-	METFH9	METFM1	20CO01-28	TM2892	TM2892	TM2892	TM2892
OMC-MW-606S	ETFJ0	ETFM1	-	METFJ0	METFM1	20CO01-29	TM2892	TM2892	TM2892	TM2892
OMC-MW-607D	ETFJ1	ETFG3	-	METFJ1	METFG3	20CO01-30	TM2769	TM2769	TM2769	TM2769
OMC-MW-607S	ETFJ2	ETFG3	-	METFJ2	METFG3	20CO01-31	TM2769	TM2769	TM2769	TM2769
OMC-MW-610D	ETFJ3	ETFF5	ETFF5	METFJ3	METFF2	20CO01-32	TM2704	TM2704	TM2704	TM2704
OMC-MW-610S	ETFJ4	ETFF5	ETFF5	METFJ4	METFF2	20CO01-33	TM2704	TM2704	TM2704	TM2704
OMC-MW-612D	ETFJ5	ETFM1	-	METFJ5	METFM1	20CO01-34	TM2892	TM2892	TM2892	TM2892
OMC-MW-612S	ETFJ6	ETFM1	-	METFJ6	METFM1	20CO01-35	TM2892	TM2892	TM2892	TM2892
OMC-MW-612S-R	ETFJ7	ETFM1	-	METFJ7	METFM1	20CO01-36	TM2892	TM2892	TM2892	TM2892
OMC-MW-613D	ETFJ8	ETFM1	ETFM0	METFJ8	METFG8	20CO01-37	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-613S	ETFJ9	ETFM1	-	METFJ9	METFG8	20CO01-38	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-614D	ETFK0	ETFM1	-	METFK0	METFG8	20CO01-39	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-614S	ETFK1	ETFM1	-	METFK1	METFG8	20CO01-40	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-615D	ETFK2	ETFG3	-	METFK2	METFG3	20CO01-41	TM2769	TM2769	TM2769	TM2769

Table 2. Sample Summary by SDG and Sample ID
Data Usability Evaluation - December 2019
OMC Plant 2 Site (OU4), Waukegan, Illinois

	(CLP Organics		CLP Inorganics			Subcontract MNA			
Well ID	CLP#	VOC SDG	PCB SDG	CLP#	Metals SDG	SAS#	Alkalinity, Anions SDG	Sulfide SDG	TOC SDG	Dissolved Gases SDG
OMC-MW-615S	ETFK3	ETFG3	-	METFK3	METFG3	20CO01-42	TM2769	TM2769	TM2769	TM2769
OMC-MW-619D	ETFK4	ETFG3	-	METFK4	METFF2	20CO01-43	TM2704	TM2704	TM2704	TM2704
OMC-MW-619S	ETFK5	ETFG3	-	METFK5	METFF2	20CO01-44	TM2704	TM2704	TM2704	TM2704
OMC-MW-620D	ETFK6	ETFG3	-	METFK6	METFG3	20CO01-45	TM2769	TM2769	TM2769	TM2769
OMC-MW-620S	ETFK7	ETFG3	-	METFK7	METFG3	20CO01-46	TM2769	TM2769	TM2769	TM2769
OMC-MW-621D	ETFK8	ETFM1	-	METFK8	METFM1	20CO01-47	TM2892	TM2892	TM2892	TM2892
OMC-MW-621S	ETFK9	ETFK9	-	METFK9	METFM1	20CO01-48	TM2892	TM2892	TM2892	TM2892
OMC-MW-621S-R	ETFL0	ETFK9	-	METFL0	METFM1	20CO01-49	TM2892	TM2892	TM2892	TM2892
OMC-MW-623D	ETFL1	ETFF5	ETFF5	METFL1	METFF2	20CO01-50	TM2704	TM2704	TM2704	TM2704
OMC-MW-623S	ETFL2	ETFF5	ETFF5	METFL2	METFF2	20CO01-51	TM2704	TM2704	TM2704	TM2704
OMC-MW-624D	ETFL3	ETFF5	ETFF5	METFL3	METFF2	20CO01-52	TM2704	TM2704	TM2704	TM2704
OMC-MW-624S	ETFL4	ETFF5	ETFF5	METFL4	METFG8	20CO01-53	TM2704	TM2704	TM2704	TM2704
OMC-MW-624S-R	ETFL5	ETFF5	ETFF5	METFL5	METFG8	20CO01-54	TM2704	TM2704	TM2704	TM2704
OMC-MW-625D	ETFM8	ETFK9	-	METFM8	METFM1	20CO01-67	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-625S	ETFM9	ETFK9	-	METFM9	METFM1	20CO01-68	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-MW-626D	ETFN0	ETFG3	-	METFN0	METFG3	20CO01-69	TM2769	TM2769	TM2769	TM2769
OMC-MW-626S	ETFN1	ETFM0	-	METFN1	METFG3	20CO01-70	TM2769	TM2769	TM2769	TM2769
OMC-ST-MW-1D	ETFL8	ETFK9	ETFK9	METFL8	METFG8	20CO01-57	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-ST-MW-1S	ETFL9	ETFK9	ETFK9	METFL9	METFG8	20CO01-58	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-ST-MW-2D	ETFM0	ETFM0	ETFM0	METFM0	METFG3	20CO01-59	TM2769	TM2769	TM2769	TM2769
OMC-ST-MW-2S	ETFM1	ETFM1	ETFM1	METFM1	METFM1	20CO01-60	TM2769	TM2769	TM2769	TM2769
OMC-ST-MW-3D	ETFM2	ETFK9	ETFK9	METFM2	METFG8	20CO01-61	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892

DATA USABILITY EVALUATION—DECEMBER 2019 OMC PLANT 2 SITE (OU4), WAUKEGAN, ILLINOIS WA NO. 237-RARA-0528, CONTRACT NO. EP-S5-06-01

Table 2. Sample Summary by SDG and Sample ID

Data Usability Evaluation - December 2019 OMC Plant 2 Site (OU4), Waukegan, Illinois

Well ID	CLP Organics			CLP Ino	rganics	Subcontract MNA				
	CLP#	VOC SDG	PCB SDG	CLP#	Metals SDG	SAS#	Alkalinity, Anions SDG	Sulfide SDG	TOC SDG	Dissolved Gases SDG
OMC-ST-MW-3S	ETFM3	ETFK9	ETFK9	METFM3	METFG8	20CO01-62	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-ST-MW-4D	ETFM4	ETFK9	ETFM0	METFM4	METFM1	20CO01-63	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-ST-MW-4S	ETFM5	ETFK9	ETFM0	METFM5	METFM1	20CO01-64	TM2885, TM2887	TM2885, TM2887	TM2892	TM2892
OMC-ST-MW-5D	ETFM6	ETFG3	ETFG3	METFM6	METFG3	20CO01-65	TM2769	TM2769	TM2769	TM2769
OMC-ST-MW-5S	ETFM7	ETFG3	ETFG3	METFM7	METFG3	20CO01-66	TM2769	TM2769	TM2769	TM2769
OMC-TB1-120419	ETFN4	ETFM0	-	-	-	-	-	-	-	-
OMC-TB2-120619	ETFN5	ETFK9	-	-	-	-	-	-	-	-
OMC-W-5	ETFL6	ETFG3	ETFG3	METFL6	METFG3	20CO01-55	TM2769	TM2769	TM2769	TM2769
OMC-W-5-R	ETFL7	ETFG3	ETFG3	METFL7	METFG3	20CO01-56	TM2769	TM2769	TM2769	TM2769

CLP = contract laboratory program; SAS# = service analytical sample number; SDG# = sample delivery group; VOC = volatile organic compound; PCB = polychlorinated biphenyls/aroclors; MNA = monitored natural attenuation; TOC = total organic carbon

Subcontract Laboratory Data

Alkalinity, anions (chloride, nitrate, nitrite, sulfate), sulfide, dissolved gases (methane, ethane, ethene), and TOC were analyzed by Katahdin Analytical and reported in SDGs TM2661, TM2804, TM2769, TM2892, TM2885, and TM2887. CH2M performed a level III review on 100 percent of the data set that included validated the data set composed of 63 native samples (4 of which were designated as MS/MSD samples), 7 FD samples, 1 EB, and 1 FB, for a total of 72 field samples.

The data were reviewed to assess their analytical accuracy, precision, and completeness. The review was conducted in accordance with the site-specific QAPP (CH2M 2013). A forms review was conducted on 100 percent of the definitive data.

The forms review consisted of a review of the following QC items:

- Holding times and sample receipt conditions
- Required QC samples at the specified frequencies
- Laboratory control sample precision and accuracy
- MS/MSD precision and accuracy
- Blank contamination and, if any, its impact on the analytical results
- Initial calibration and continuing calibration precision and accuracy
- Laboratory and FD precision
- Method Reporting Limit check precision and accuracy

The QA/QC limits implemented during the data quality evaluation were those listed in the site-specific QAPP. Standard data qualifiers were added as a means of classifying the data as to their conformance to QA/QC requirements. The data qualifiers are defined as follows:

- [J] Estimated. The analyte was below the stated reporting limit (RL), but greater than the method detection limit, or there is an analytical bias.
- [J+] Biased High. The analyte was positively identified, but the associated numerical value is approximate (metals only).
- [J-] Biased Low. The analyte was positively identified, but the associated numerical value is approximate (metals only).
- [U] Undetected. The analyte was analyzed for but not detected at a concentration equal to or greater than the laboratory RL.
- [UJ] Estimated. The component was analyzed for but was not detected at a level equal to or greater than the level of detection. This flag is used when QC measurements indicate a possible low bias in the analytical data.

The analytical results were within project control limits, except where noted in the following sections. Attachment 1 lists the validator applied qualifiers.

Hold Time and Sample Integrity

Generally, the samples were properly preserved and analyzed within standard hold times. Exceptions are outlined as follows:

• Laboratory technicians noted that the vial used for the analysis of sample 20CO01-02 dilution (reported in TM2704) had observable headspace, which could compromise sample integrity.

Methane was the only analyte that was reported out of the diluted analysis. CH2M validators qualified the result as estimated "J", per professional judgement.

- The vial used for the analysis of sample 20CO01-20 (reported in TM2769) also had headspace. Ethane and ethene were both reported out of this sample, and CH2M validators qualified the results as estimated "J", per professional judgement. Methane was reported from a diluted sample, which came from a vial without headspace. Therefore, methane required no qualification.
- Dissolved gas samples require preservation to a pH less than 2. Laboratory technicians reported that several samples were found to have a pH greater than 2, including 2 samples in SDG TM2769 (20C001-41 and 20C001-45), and 6 samples in SDG TM2892 (20C001-21, 20C001-23, 20C001-28, 20C001-34, 20C001-39, and 20C001-47). As the samples were collected in vials containing preservative, the laboratory assumes that the high pH were likely due to a matrix effect. Though samples were analyzed within the standard hold time, improper preservation may have allowed for microbial conversion or other degradation to the sample. Therefore, CH2M validators used professional judgement to qualify methane, ethane, and ethene, in these samples as estimated "J".

Due to laboratory error, several samples were analyzed outside twice the standard hold time of 28 days for chloride and/or sulfate. Though analysis of these samples was performed outside of twice the standard hold time, CH2M validators determined per professional judgement that, as chloride and sulfate are generally more stable anions, the sample integrity would not have declined significantly over a few additional days and the data need not be rejected. These samples were instead qualified as estimated: detects "J" and nondetects "UJ" for the following samples:

- In SDG TM2769, 20CO01-45 exceeded hold time for chloride and sulfate, and 20CO01-41 exceeded for chloride only.
- In SDG TM2892, these samples include 20CO01-14, 20CO01-15, and 20CO01-28, which exceeded both chloride and sulfate, and 20CO01-36, which exceeded for chloride only.
- In SDG TM2885/TM2887, these samples include 20CO01-23, 20CO01-25, and 20CO01-39, which exceeded for chloride and sulfate, and 20CO01-27, which exceeded for chloride only.

A shipment of samples was received outside of the 48-hour hold time for nitrate and nitrite analysis. Samples were analyzed immediately upon receipt, though some samples were a few hours past 2 times the standard hold time. CH2M validators determined, per professional judgement, that no samples require rejection. The nitrate and nitrite results reported in SDGs TM2885 and TM2887 exceeded hold time and were qualified as estimated: detects "J" and nondetects "UJ".

Blank Samples

Blank samples were analyzed at required frequencies, with the following exceptions to accuracy and precision criteria:

Method blanks were analyzed as required, and generally accuracy and precision criteria were met, with the following exceptions:

- In SDG TM2661, alkalinity was detected below the RL in method blank samples WG267688-1 and WG268159-1. Analyte concentrations in the associated samples exceeded 5 times the blank concentrations, no qualification was required.
- In SDG TM2704, methane was detected below the RL in method blank samples WG268083-1, WG268155-1, and WG268483-1. Alkalinity was detected below the RL in method blank sample WG267787-1. TOC was detected below the RL in method blank samples WG268256-1 and WG268257-1.

- Samples 20C001-05 and 20C001-33 (associated with WG268083-1), and 20C001-71 and 20C001-72 (associated with WG268155-1) had concentrations of methane that were below the RL. These samples were qualified as nondetect "U" and reported to the RL per National Functional Guidelines (NFG) criteria. Methane concentrations in samples associated with blank WG268483-1 were greater than both the RL and 5 times the blank; no qualification was required.
- Alkalinity as detected below the RL in associated samples 20CO01-71 and 20CO01-72; samples were qualified nondetect "U" and reported to the RL per NFG criteria.
- In samples 20C001-03 and 20C001-05 (associated with WG268256-1), TOC was detected above the RL, but at concentrations less than 5 times the blank. Samples were qualified nondetect "U" and reported at the original result. Samples 20C001-08, 20C001-11, 20C001-33, 20C001-44, 20C001-51, 20C001-53, and 20C001-54 (associated with WG268257-1) were detected above the RL, but at concentrations less than 5 times the blank. Samples were qualified nondetect "U" and reported at the original result.
- In SDG TM2769, alkalinity was detected below the reporting limit in samples WG267874-1 and WG268159-1, methane was detected below the RL in method blank samples WG268155-1, WG268264-1, and WG268522-1, and TOC was detected below the reporting limit in method blank samples WG268418-1 and WG268419-1.
 - Alkalinity was detected above the RL at concentrations greater than 5 times the blank in associated samples and no qualification was required.
 - Methane was detected in sample 20CO01-12 (associated with WG268155-1) above the RL, but at a concentration less than 5 times the blank. 20CO01-12 was qualified nondetect "U" and reported at the original result. Methane was detected below the RL in sample 20CO01-13 (associated with WG268155-1) and was therefore qualified nondetect "U" and reported to the RL per NFG criteria.
 - TOC was detected above the RL in sample 20CO01-12 at a concentration less than 5 times the associated blank (WG268418-1); this sample was therefore qualified as nondetect "U" and reported at the original result. TOC was detected above the RL in samples 20CO01-31, 20CO01-60, 20CO01-65, 20CO01-55, and 20CO01-56 at concentrations less than 5 times the associated blank (WG268419-1); therefore, these samples were qualified nondetect "U" and reported at the original results.
- In SDG TM2892, alkalinity was detected below the RL in method blank samples WG268090-1, WG268091-1, WG268159-1, and WG268261-1, methane was detected below the RL in method blanks WG268483-1, WG268522-1, WG268596-1, and WG268679-1, and TOC was detected below the RL in method blanks WG268421-1 and WG268498-1. These analytes were detected above the RL at concentrations greater than 5 times the blank in their associated samples and no qualification was required.
- In SDG TM2885/TM2887, alkalinity was detected below the RL in method blank samples WG268090-1, WG268261-1. As alkalinity was detected above the RL at concentrations greater than 5 times the blank in associated samples, no qualification was required.
- The FB (20CO01-72), included in SDG TM2704 and associated with the samples collected on December 3, 2019, had detected concentrations of alkalinity, methane, and TOC below the RL. Samples associated with this blank are reported in SDG TM2704 and include 20CO01-01, 20CO01-02, 20CO01-03, 20CO01-04, 20CO01-05, 20CO01-06, 20CO01-07, 20CO01-08, 20CO01-09, 20CO01-32, 20CO01-33, 20CO01-43, 20CO01-44, 20CO01-52, 20CO01-53, and 20CO01-54.

- In SDG SM2704, methane was detected above the RL in sample 20CO01-03 at a concentration less than 5 times the blank; the sample was therefore qualified nondetect "U" and reported at the original concentration. Methane was detected below the RL in samples 20CO01-05 and 20CO01-33, which were therefore qualified nondetect "U" and reported to the RL, per NFG criteria. TOC was detected above the RL in 20CO01-05, 20CO01-33, 20CO01-53, and 20CO01-54, but at concentrations less than 5 times the blank; therefore, these samples were qualified nondetect "U" and reported at the original sample concentration. Alkalinity concentrations in associated samples exceeded 5 times the blank and required no qualification.
- The EB (20CO01-71), included in SDG SM2704, had concentrations of alkalinity, methane, and TOC detected below the RL. The samples collected during this field event are associated with this blank.
 - In SDG TM2704, methane was detected above the RL in sample 20C001-03, and below the RL in samples 20C001-05 and 20C001-33. Though methane in 20C001-03 was above the RL, it did not exceed 5 times the blank and was therefore qualified nondetect "U" and reported at the original concentration. Samples 20C001-05 and 20C001-33 were qualified nondetect "U" and reported to the RL, per NFG criteria. TOC was detected above the RL in 20C001-05, 20C001-11, 20C001-33, 20C001-53, and 20C001-54, but at concentrations that did not exceed 5 times the blank; therefore, these samples were qualified nondetect "U" and reported at the original sample concentration. Alkalinity concentrations exceeded 5 times the blank for associated samples and required no qualification.
 - In SDG TM2769, methane was detected above the RL in samples 20CO01-12 and 20CO01-60, but at concentrations that did not exceed 5 times the blank. These samples were qualified nondetect "U" and reported at their original concentrations. Methane was detected below the RL in sample 20CO01-13 and was qualified nondetect "U" and reported at the RL per NFG criteria.

Matrix Spike/Matrix Spike Duplicate

Matrix spikes and matrix spike duplicates were analyzed at the appropriate frequency of 1 per 20 samples, and generally accuracy and precision criteria were met, with the following exceptions:

- Due to laboratory error, chloride was not analyzed for in samples 20C001-01 MS and MSD (reported in SDG TM2661), for which extra sample volume was provided by field teams. However, MS were performed on other project samples selected by the laboratory for chloride, meeting the required frequency of 1 MS per 20 samples. No further action was required.
- In SDG TM2661, percent recovery (%R) for sulfate was below the lower control limit in MS samples 20CO01-10 MS and 20CO01-17 MS. These recoveries were within NFG criteria but exceeded laboratory criteria. CH2M validators chose to qualify the results based on the more conservative laboratory criteria. Sulfate was nondetect in parent sample 20CO01-10 and detected above the RL in parent sample 20CO01-17, and was qualified as estimated/estimated biased low; "UJ" and "J-" respectively.
- In SDG TM2704, %R for methane could not be calculated for the MS and MSD samples associated with parent samples 20C001-10 and 20C001-17. As methane concentrations in the parent samples exceeded 4 times the spike, CH2M validators determined that no qualification was necessary.
- In SDG TM2704, nitrite exceeded the lower control limit (LCL) for %R in sample 20CO01-01 MS. Nitrite was detected in parent sample 20CO01-01 and was therefore qualified as estimated biased low "J-".

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- In SDG TM2769, %R for chloride was below the LCL in the MS of sample 20C001-59, and %R for methane and nitrate was below the LCL in both the MS and MSD. Chloride, detected above the RL in the parent sample, was qualified as estimated biased low "J-"; nitrate, which was nondetect in the parent, was qualified as estimated "UJ". CH2M validators determined that no qualification was required for methane as the original parent sample concentration exceeded 4 times the blank.
- In SDG TM2769, sulfate fell below the LCL for %R in sample 20CO01-60 MS and exceeded the relative percent difference (RPD) criteria between the MS and MSD. Sulfate was detected in parent sample 20CO01-60 and was therefore gualified as estimated biased low "J-".
- In SDG TM2892, chloride exceeded the LCL for %R in samples 20CO01-47 MS and 20CO01-48 MS, and sulfate exceeded the LCL for %R in 20CO01-48. As the original sulfate concentration in parent 20CO01-48 exceeded 4 times the spike, no qualification was required. Chloride was detected in both parent samples 20CO01-47 and 20CO01-48 and was therefore qualified as estimated biased low "J-".
- In SDG TM2885, TM2887, nitrate and nitrite exceeded the LCL for %R, and was less than 30 percent in sample 20CO01-21 MS. In the narrative, the laboratory believes the sample was incorrectly spiked. However, as there was MSD analyzed to provide a comparison, samples were flagged following NFG criteria. Nitrate was nondetect in parent sample 20CO01-21 and was rejected "R". Nitrite was detected below the RL and was qualified as estimated biased low "J-".

Field Duplicates

A total of 7 FD samples were collected for analysis, meeting the minimum frequency of 1 per 10 field samples. FD samples were collected immediately following the parent sample and analyzed for the same parameters. The precision criteria, an RPD of less than 30 percent, was met, with the following exceptions:

- In SDG TM2769, RPD for methane exceeded criteria in parent sample 20CO01-55 and FD sample 20CO01-56. Methane was detected in both parent and FD and was therefore qualified as estimated "J".
- In SDG TM2892, RPD for alkalinity, ethene, and methane exceeded criteria in parent sample 20CO01-48 and FD sample 20CO01-49. These analytes were detected in both parent and duplicate and were therefore qualified as estimated "J".

Contract Laboratory Program Data

The samples were analyzed for VOCs by a laboratory in EPA's CLP. EPA's Environmental Service Assistance Team (ESAT) contractor, TechLaw, reviewed the data set from the laboratory to assess the accuracy and precision of the method and the matrix using criteria established in the NFG (EPA 2017) and verified that the data set was complete. ESAT validators also added data qualifiers when the QC statistics indicated a possible bias to specific compounds or analytes associated with a particular method and sample batch.

Standard data qualifiers are a means to classify the data with regard to their conformance to QC requirements. The applied data qualifiers are defined as follows:

- [U] The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- [J] The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- [J+] The result is an estimated quantity; the results may be biased high.
- [J-] The result is an estimated quantity; the results may be biased low.

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- [UJ] The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and to precisely measure the analyte in the sample.
- [R] The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

CH2M reviewed the validation performed by Techlaw for the groundwater samples in Case Number 48662; SDG numbers ETFF5, ETFG3, ETFK9, ETFM0, and ETFM1 are associated with VOC and PCB Aroclor analysis, and SDG numbers METFF2, METFG3, METFG8, and METFM1 are associated with dissolved metals. The VOC and dissolved metals data set includes 63 native samples (of which 4 were designated MS/MSD samples), 7 FD samples, 1 FB, and 1 EB, and 2 VOC TBs, for a total of 74 and 72 field samples, respectively. The PCB Aroclor data set included 22 native samples (2 of which were designated as MS/MSD samples), 2 FDs, 1 FD, and 1 EB, for a total of 26 samples.

The EPA validation case narrative worksheets indicate that some sample results should be qualified as estimated based on the applicable QC statistics or other NFG requirements. Attachment 1 lists the CH2M validator applied qualifiers. Attachment 2 contains the ESAT narratives and worksheets.

Validation of Field Quality Control Samples

EPA's ESAT validators, Techlaw, reviewed field QC samples, including field and EB samples, and FDs, but did not qualify results. CH2M validators reviewed the aforementioned field QC samples and VOC TB samples in accordance with the QAPP. QC criteria were generally met, except where outlined in the following subsections.

Blanks

Blank samples were analyzed at required frequencies, including 1 EB, 1 FB, and 2 TBs. Exceptions to accuracy and precision criteria are outlined as follows:

- In FB ETFN3 (reported in SDG ETFF5), acetone, 2-butanone, and toluene were detected below the RL. This blank is associated with all samples collected December 3, 2019. Associated samples in SDG ETFF5 include ETFF2, ETFF3, ETFF4, ETFF7, ETFF8, ETFF9, ETFJ3, ETFJ4, ETFL1, ETFL2, and ETFL3. Associated samples in SDG ETFG3 include ETFK4 and ETFK5.
 - In SDG ETFF5, acetone and 2-butanone were nondetect in the associated samples, and no
 qualification was required. Toluene was detected above the RL in sample ETFG1, but at a
 concentration less than 5 times the blank; therefore, the sample was qualified nondetect "U"
 and reported at the original concentration. The other associated samples were nondetect for
 toluene and no qualification was required.
 - The associated samples in SDG ETFG3 were nondetect for acetone, 2-butanone, and toluene and therefore required no qualification.
- In EB ETFN2 (reported in SDG ETFF5), 2-butanone and toluene were detected below the RL, and acetone was detected above the RL. This blank is associated with the samples in the data set.
 - In SDG ETFF5, acetone and 2-butanone were nondetect in the associated samples, and no
 qualification was required. Toluene was detected above the RL in sample ETFG1, but at a
 concentration less than 5 times the blank; therefore, the sample was qualified nondetect "U"
 and reported at the original concentration. The other associated samples were nondetect for
 toluene and no qualification was required.
 - In SDG ETFG3, acetone and 2-butanone were detected above the RL in samples ETFK2 and ETFK6, but at concentrations less than 5 times the blank; therefore, these samples were

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- qualified nondetect "U" and reported at the original sample concentration. Toluene was nondetect in the samples and required no qualification.
- The samples in SDG ETFK9 and ETFM0 were nondetect for acetone, 2-butanone, and toluene and required no qualification.
- In SDG ETFM1, acetone was detected below the RL in samples ETFG5 and ETFK8, and above the RL in samples ETFH2, ETFH9, and ETFJ5. ETFG5 and ETFK8 were qualified nondetect "U" and reported to the RL per NFG criteria. Though ETFH2, ETFH9, and ETFJ5 were detected above the RL, concentrations did not exceed 5 times the blank; samples were therefore qualified nondetect "U" and reported at the original sample concentration. 2-butanone was detected below the RL in samples ETFG5, ETFH4, and ETFK8, and above the RL in samples ETFH9 and ETFJ5. Concentrations of 2-butanone in ETFH9 and ETFJ5 were greater than 5 times the blank, and no qualification was required. Samples ETFG5 and ETFK8 were qualified nondetect "U" and reported to the RL per NFG criteria. ETFH4 was a diluted sample, and though 2-butanone was technically detected below the RL, the result was significantly greater than 5 times the blank. CH2M validators determined that this detection was not affected by the low-level blank contamination and no qualification was applied. Toluene was nondetect in the associated samples and no qualification was required.

Field Duplicate Samples

A total of 4 FD samples were collected for VOC and dissolved metals analysis, and 2 analyzed for PCB aroclor analysis, meeting the minimum frequency of 1 per 10 field samples. FD samples were collected immediately following the parent sample and analyzed for the same parameters. The precision criteria, an RPD of less than 30 percent, was met for the analytes and no qualification was required.

Findings

The following subsections summarize the data validation findings and usability of the final report table results. The sample numbers and locations do not include QA/QC samples.

Volatile Organic Compound Data

The VOC data set consists of the results for 51 analytes for each of the 63 monitoring well samples, excluding QA/QC samples, for a total of 3,213 results.

The data validation summary indicates the following:

- J, J+, U and UJ qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the method detection limit and the RL.
- Nondetected sample results were qualified U.
- None of the reported VOC data was rejected.

Though the evaluation of blanks and other QA/QC data indicates possible estimate values, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Polychlorinated Biphenyl Aroclor Data

The PCB aroclor data set consists of the results for 9 aroclors for 21 monitoring well samples, excluding QA/QC samples, creating 180 results.

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The validation of the PCB aroclor data indicates the following:

- J, J+, and U qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the method detection limit and the RL.
- Nondetected sample results were qualified U.
- None of the reported PCB aroclor data was rejected.

Though the evaluation of QA/QC data indicates possible estimate values, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Dissolved Metals Data

The metals data set consists of the results for 3 analytes for each of the 63 monitoring well sample, excluding QA/QC samples, for a total of 189 results. The validation summary of the metals data set indicates the following:

- J and U qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the method detection limit and the RL.
- Nondetected sample results were qualified U.
- None of the reported dissolved metals data was rejected.

Though the evaluation of QA/QC data indicates possible estimate values, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Alkalinity Data

The alkalinity data set consists of 63 results, excluding QA/QC. The validation summary of the alkalinity data indicates the following:

- J and U qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the method detection limit and the RL.
- Nondetected sample results were qualified U.
- None of the reported alkalinity data was rejected.

Though the evaluation of blanks and other QA/QC data indicates possible estimate values, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

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Anions Data

The anions data set includes chloride, nitrate, nitrite, and sulfate for 63 monitoring well samples, excluding QA/QC samples, for a total of 252 results. The validation summary of the anions data indicates the following:

- J, J-, and UJ qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- R qualifiers were applied to sample results that were rejected.
- J qualifiers were applied to sample results that were reported between the method detection limit and the RL.
- Nondetected sample results were qualified U.
- One nitrate result was rejected due to poor matrix spike recovery.
- Several samples were analyzed outside of hold time, including the nitrate and nitrite samples in SDG TM2885/TM2887, but no samples were rejected for this exceedance. Detects were qualified as estimated "J" and nondetects qualified "UJ".

For anions, 99 percent of the data, as qualified, can be used to make project decisions.

Sulfide Data

The sulfide data set consists of 63 results, excluding QA/QC samples. The validation of the sulfide data indicates the following:

- There was no indication of QA/QC deficiencies, and no additional qualification was needed.
- J qualifiers were applied to sample results that were reported between the method detection limit and the RL.
- Nondetected sample results were qualified U.
- None of the sulfide data was rejected.

For sulfide, 100 percent of the data, as qualified, can be used to make project decisions.

Dissolved Gases Data

The dissolved gases data set includes methane, ethane, and ethene for 63 monitoring well samples, excluding QA/QC samples, for a total of 189 results. The validation of the dissolved gases data indicates the following:

- J and U qualifiers were applied to sample results that were potentially affected by QC deficiencies.
- The evaluation of blanks data indicates possible bias due to applicable QC statistics. U qualifiers were applied to sample results potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the method detection limit and the RL.
- Nondetected sample results were qualified U.
- Several samples were found to be improperly preserved at time of analysis with pH greater than 2, which is suspected to be a result of matrix effect and not improper preservation in the field. Other samples were found to have significant headspace in the sample vials. As sample integrity could have been affected by either of these deficiencies, these samples were qualified as estimated J per professional judgment.
- None of the dissolved gases data was rejected.

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Though the evaluation of blanks and other QA/QC data indicates possible estimate values, the accuracy and precision are generally acceptable, and the data set completeness is deemed as 100 percent usable and may be used in the project decision-making process with qualification.

Total Organic Carbon Data

TOC data set consists of 63 results, excluding QA/QC samples. The validation summary of the TOC data indicates the following:

- The evaluation of blanks data indicates possible bias due to applicable QC statistics. U qualifiers were applied to sample results potentially affected by QC deficiencies.
- J qualifiers were applied to sample results that were reported between the method detection limit and the RL.
- Nondetected sample results were qualified U.
- None of the reported TOC results were rejected.

For TOC, 100 percent of the data, as qualified, can be used to make project decisions.

Overall Assessment

The final activity in the data quality evaluation is an assessment of whether the data meet the data quality objectives. The goal of the assessment was to demonstrate that a sufficient number of representative samples were collected, and the resulting analytical data can be used to support the decision-making process. The following summary highlights the data evaluation findings for the above-defined events:

- The precision and accuracy of the data, as measured by field and laboratory QC indicators, indicate that the data quality objectives were met.
- Some anions samples were analyzed outside of hold time. No data were rejected for this QC deficiency, but one nitrate result was rejected for extremely low matrix spike recovery.
 Ninety-nine percent of anions data can be considered usable as qualified.
- The integrity of dissolved gases results for some samples could have been affected by improper preservation (pH greater than 2) or significant headspace in the vials. No data was rejected due to these deficiencies, but results are qualified as estimated. 100 percent of the data can be considered usable as qualified.
- The completeness objective of 90 percent was met for all method/analyte combinations.

References

CH2M HILL, Inc. (CH2M). 2013. *Quality Assurance Project Plan, Revision 2, OMC Plant 2 Site, Waukegan, Illinois. WA No. 105-RARA-0528, Contract No. EP-S5-06-01.* March.

CH2M HILL, Inc. (CH2M). 2017. Quality Assurance Project Plan Addendum II Letter, OMC Plant 2 Site, Waukegan, Illinois. WA No. 237-RARA-528, Contract No. EP-S5-06-01. October.

CH2M HILL, Inc. (CH2M). 2019. *Quality Assurance Project Plan Addendum III Letter, OMC Plant 2 Site, Waukegan, Illinois. WA No. 237-RARA-528, Contract No. EP-S5-06-01.* February.

U.S. Environmental Protection Agency (EPA). 2016. *National Functional Guidelines for Superfund Organic Methods Data Review*. EPA-540-R-2016-002. September.

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Data Usability Evaluation - December 2019 OMC Plant 2 Site (OU4), Waukegan, Illinois

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Comula Nama	CLD/CAC#	SDG	CAS#	Amaluta	Initial Bassilt	Laboratory Qualification	Final Danult	Validator	Units	CU2NA Decease Code
Sample Name OMC-MW-11D	20CO01-01	TM2704	14797-65-0	Analyte Nitrite	0.11	Qualification	0.11	J-		CH2M Reason Code MS <lcl< th=""></lcl<>
OMC-MW-11D-R	20CO01-01 20CO01-02	TM2704	74-82-8		2800	В	2800	J-	mg/L μg/L	
				Methane		В В		U J		Preservation
OMC-MW-11S	20CO01-03	TM2704	74-82-8	Methane	17	В	17		μg/L	EB, FB
OMC-MW-11S	20CO01-03	TM2704	TOC	Total Organic Carbon	2.9		2.9	U	mg/L	MB
OMC-MW-3S	20CO01-05	TM2704	74-82-8	Methane	5.2	JB	10	U	μg/L	EB, FB, MB
OMC-MW-3S	20CO01-05	TM2704	TOC	Total Organic Carbon	1.5		1.5	U	mg/L	EB, FB, MB
OMC-MW-513D	20CO01-08	TM2704	TOC	Total Organic Carbon	3.1		3.1	U	mg/L	MB
OMC-MW-516D	20CO01-10	TM2661	14808-79-8	Sulfate	10	U	10	UJ	mg/L	MS <lcl< td=""></lcl<>
OMC-MW-516D	ETFG1	ETFF5	108-88-3	Toluene	5.1		5.1	U	μg/L	EB, FB
OMC-MW-516S	20CO01-11	TM2704	TOC	Total Organic Carbon	1.6		1.6	U	mg/L	EB, MB
OMC-MW-528D	20CO01-12	TM2769	74-82-8	Methane	11	В	11	U	μg/L	EB, MB
OMC-MW-528D	20CO01-12	TM2769	TOC	Total Organic Carbon	2.4		2.4	U	mg/L	MB
OMC-MW-528S	20CO01-13	TM2769	74-82-8	Methane	4.2	JB	10	U	μg/L	EB, MB
OMC-MW-600D	20CO01-14	TM2892	16887-00-6	Chloride	240		240	J	mg/L	HT
OMC-MW-600D	20CO01-14	TM2892	14808-79-8	Sulfate	3.5		3.5	J	mg/L	НТ
OMC-MW-600D	ETFG5	ETFM1	78-93-3	2-Butanone	7.9	J	10	U	μg/L	EB
OMC-MW-600D	ETFG5	ETFM1	67-64-1	Acetone	6.7	J	10	U	μg/L	EB
OMC-MW-600S	20CO01-15	TM2892	16887-00-6	Chloride	44		44	J	mg/L	НТ
OMC-MW-600S	20CO01-15	TM2892	14808-79-8	Sulfate	120		120	J	mg/L	HT
OMC-MW-601S	20CO01-17	TM2661	14808-79-8	Sulfate	63		63	J-	mg/L	MS <lcl< td=""></lcl<>
OMC-MW-602S	20CO01-20	TM2769	74-84-0	Ethane	100		100	J	μg/L	Preservation
OMC-MW-603D	20CO01-21	TM2892	74-84-0	Ethane	310		310	J	μg/L	Preservation
OMC-MW-603D	20CO01-21	TM2892	74-85-1	Ethene	5000		5000	J	μg/L	Preservation
OMC-MW-603D	20CO01-21	TM2892	74-82-8	Methane	21000	В	21000	J	μg/L	Preservation
OMC-MW-603D	20CO01-21	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	R	mg/L	HT, MS<30%
OMC-MW-603D	20CO01-21	TM2885/TM2887	14797-65-0	Nitrite	0.012	J	0.012	J-	mg/L	HT, MS<30%
OMC-MW-603D	ETFH2	ETFM1	67-64-1	Acetone	16		16	U	μg/L	EB
OMC-MW-603S	20CO01-22	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	НТ
OMC-MW-604D	20CO01-23	TM2885/TM2887	16887-00-6	Chloride	220		220	J	mg/L	НТ
OMC-MW-604D	20CO01-23	TM2892	74-84-0	Ethane	3000		3000	J	μg/L	Preservation
OMC-MW-604D	20CO01-23	TM2892	74-85-1	Ethene	700		700	J	μg/L	Preservation
OMC-MW-604D	20CO01-23	TM2892	74-82-8	Methane	18000	В	18000	J	μg/L	Preservation
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Data Usability Evaluation - December 2019 OMC Plant 2 Site (OU4), Waukegan, Illinois

						Laboratory		CH2M Validator		_
Sample Name	CLP/SAS#	SDG	CAS #	Analyte	Initial Result		Final Result	Qualification	Units	CH2M Reason Code
OMC-MW-604D	20CO01-23	TM2885/TM2887	14797-55-8	Nitrate	0.1	U	0.1	UJ	mg/L	HT
OMC-MW-604D	20CO01-23	TM2885/TM2887	14808-79-8	Sulfate	20	U	20	UJ	mg/L	HT
OMC-MW-604S	20CO01-24	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-604S	20CO01-24	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-605D	20CO01-25	TM2885/TM2887	16887-00-6	Chloride	350		350	J	mg/L	HT
OMC-MW-605D	20CO01-25	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-605D	20CO01-25	TM2885/TM2887	14797-65-0	Nitrite	0.055		0.055	J	mg/L	НТ
OMC-MW-605D	20CO01-25	TM2885/TM2887	14808-79-8	Sulfate	240		240	J	mg/L	HT
OMC-MW-605D-R	20CO01-26	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-605S	20CO01-27	TM2885/TM2887	16887-00-6	Chloride	35		35	J	mg/L	HT
OMC-MW-605S	20CO01-27	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-605S	20CO01-27	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-606D	20CO01-28	TM2892	16887-00-6	Chloride	200		200	J	mg/L	HT
OMC-MW-606D	20CO01-28	TM2892	74-84-0	Ethane	280		280	J	μg/L	Preservation
OMC-MW-606D	20CO01-28	TM2892	74-85-1	Ethene	21000		21000	J	μg/L	Preservation
OMC-MW-606D	20CO01-28	TM2892	74-82-8	Methane	17000	В	17000	J	μg/L	Preservation
OMC-MW-606D	ETFH9	ETFM1	67-64-1	Acetone	40		40	U	μg/L	EB
OMC-MW-607S	20CO01-31	TM2769	TOC	Total Organic Carbon	2.7		2.7	U	mg/L	MB
OMC-MW-610S	20CO01-33	TM2704	74-82-8	Methane	5.5	JB	10	U	μg/L	EB, FB, MB
OMC-MW-610S	20CO01-33	TM2704	TOC	Total Organic Carbon	2.1		2.1	U	mg/L	EB, FB, MB
OMC-MW-612D	20CO01-34	TM2892	74-84-0	Ethane	12		12	J	μg/L	Preservation
OMC-MW-612D	20CO01-34	TM2892	74-85-1	Ethene	5300		5300	J	μg/L	Preservation
OMC-MW-612D	20CO01-34	TM2892	74-82-8	Methane	7300	В	7300	J	μg/L	Preservation
OMC-MW-612D	ETFJ5	ETFM1	67-64-1	Acetone	55		55	U	μg/L	EB
OMC-MW-613D	20CO01-37	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-613D	20CO01-37	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-613S	20CO01-38	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-614D	20CO01-39	TM2885/TM2887	16887-00-6	Chloride	430		430	J	mg/L	HT
OMC-MW-614D	20CO01-39	TM2892	74-84-0	Ethane	140		140	J	μg/L	Preservation
OMC-MW-614D	20CO01-39	TM2892	74-85-1	Ethene	25000		25000	J	μg/L	Preservation
OMC-MW-614D	20CO01-39	TM2892	74-82-8	Methane	16000	В	16000	J	μg/L	Preservation
OMC-MW-614D	20CO01-39	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	HT

Data Usability Evaluation - December 2019 OMC Plant 2 Site (OU4), Waukegan, Illinois

						1 - 1		CH2M		
Sample Name	CLP/SAS#	SDG	CAS#	Analyte	Initial Result	Laboratory Qualification	Final Result	Validator Qualification	Units	CH2M Reason Code
OMC-MW-614D	20CO01-39	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-614D	20CO01-39	TM2885/TM2887	14808-79-8	Sulfate	330		330		mg/L	HT
OMC-MW-614S	20CO01-40	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-614S	20CO01-40	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-615D	20CO01-41	TM2769	16887-00-6	Chloride	880		880	J	mg/L	HT
OMC-MW-615D	20CO01-41	TM2769	74-84-0	Ethane	43		43	J	μg/L	Preservation
OMC-MW-615D	20CO01-41	TM2769	74-85-1	Ethene	2000		2000	J	μg/L	Preservation
OMC-MW-615D	20CO01-41	TM2769	74-82-8	Methane	23000	В	23000	J	μg/L	Preservation
OMC-MW-615D	ETFK2	ETFG3	78-93-3	2-Butanone	12		12	U	μg/L	EB
OMC-MW-615D	ETFK2	ETFG3	67-64-1	Acetone	14	J	14	U	μg/L	EB
OMC-MW-619S	20CO01-44	TM2704	TOC	Total Organic Carbon	2.6		2.6	U	mg/L	MB
OMC-MW-620D	20CO01-45	TM2769	16887-00-6	Chloride	92		92	J	mg/L	HT
OMC-MW-620D	20CO01-45	TM2769	74-84-0	Ethane	30		30	J	μg/L	Preservation
OMC-MW-620D	20CO01-45	TM2769	74-85-1	Ethene	210		210	J	μg/L	Preservation
OMC-MW-620D	20CO01-45	TM2769	74-82-8	Methane	21000	В	21000	J	μg/L	Preservation
OMC-MW-620D	20CO01-45	TM2769	14808-79-8	Sulfate	180		180	J	mg/L	HT
OMC-MW-620D	ETFK6	ETFG3	78-93-3	2-Butanone	20		20	U	μg/L	EB
OMC-MW-620D	ETFK6	ETFG3	67-64-1	Acetone	11	J	11	U	μg/L	EB
OMC-MW-621D	20CO01-47	TM2892	16887-00-6	Chloride	500		500	J-	mg/L	HT, MS <lcl< td=""></lcl<>
OMC-MW-621D	20CO01-47	TM2892	74-84-0	Ethane	48		48	J	μg/L	Preservation
OMC-MW-621D	20CO01-47	TM2892	74-85-1	Ethene	1200		1200	J	μg/L	Preservation
OMC-MW-621D	20CO01-47	TM2892	74-82-8	Methane	25000	В	25000	J	μg/L	Preservation
OMC-MW-621D	ETFK8	ETFM1	78-93-3	2-Butanone	9	J	10	U	μg/L	EB
OMC-MW-621D	ETFK8	ETFM1	67-64-1	Acetone	6.2	J	10	U	μg/L	EB
OMC-MW-621S	20CO01-48	TM2892	ALK	Alkalinity	100		100	J	mg/L	FD>RPD
OMC-MW-621S	20CO01-48	TM2892	16887-00-6	Chloride	170		170	J-	mg/L	MS <lcl< td=""></lcl<>
OMC-MW-621S	20CO01-48	TM2892	74-85-1	Ethene	55		55	J	μg/L	FD>RPD
OMC-MW-621S	20CO01-48	TM2892	74-82-8	Methane	2100	В	2100	J	μg/L	FD>RPD
OMC-MW-621S-R	20CO01-49	TM2892	ALK	Alkalinity	140		140	J	mg/L	FD>RPD
OMC-MW-621S-R	20CO01-49	TM2892	74-85-1	Ethene	21		21	J	μg/L	FD>RPD
OMC-MW-621S-R	20CO01-49	TM2892	74-82-8	Methane	1200	В	1200	J	μg/L	FD>RPD
OMC-MW-623S	20CO01-51	TM2704	TOC	Total Organic Carbon	2.7		2.7	U	mg/L	МВ

Data Usability Evaluation - December 2019 OMC Plant 2 Site (OU4), Waukegan, Illinois

Sample Name CLP/SAS# SDG CAS # Analyte Initial Result (Qualification) (Qualification) (Qualification) (Qualification) Units Validation (Qualification) (Qualification) LT U.F EB, FB, MB OMC-MW-6245-R 20C001-54 TM2704 TOC Total Organic Carbon 1.6 1.6 U mg/L EB, FB, MB OMC-MW-625D 20C001-67 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-625D 20C001-68 TM2885/TM2887 14797-65-0 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-625D 20C001-68 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-MW-625D 20C001-69 TM2769 16887-00-6 Chloride 130 U 0.05 UJ mg/L MS/ASCL OMC-ST-MW-12D 20C001-59 TM2769 16887-00-6 Chloride 130 U 0.05 UJ mg/L <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>CH2M</th> <th></th> <th></th>									CH2M		
OMC-MW-6245 20C001-53 TM2704 TOC Total Organic Carbon 1.7 1.7 U mg/L EB, FB, MB OMC-MW-6245-R 20C001-54 TM2704 TOC Total Organic Carbon 1.6 1.6 U mg/L EB, FB, MB OMC-MW-625D 20C001-67 TM2885/TM2887 14797-55-8 Nitrate 0.14 0.14 J mg/L HT OMC-MW-625D 20C001-67 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-625D 20C001-68 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-625D 20C001-68 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-51-2D 20C001-59 TM2769 14897-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-51-MW-15 20C001-59 TM2789 1687-50-							Laboratory		Validator		
OMC-MW-624S-R 20C001-54 TM2704 TOC Total Organic Carbon 1.6 1.6 U mg/L EB, FB, MB OMC-MW-625D 20C001-67 TM2885/TM2887 14797-55-8 Nitrate 0.14 0.14 J mg/L HT OMC-MW-625D 20C001-67 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-625S 20C001-68 TM2885/TM2887 14797-55-0 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-52S 20C001-68 TM2885/TM2887 14797-65-0 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-51-2D 20C001-59 TM2769 14897-55-8 Nitrate 0.05 U 0.05 UJ mg/L MS/LCL OMC-5T-MW-10 20C001-57 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-5T-MW-12 20C001-58 TM2885/TM2887	Sample Name	CLP/SAS#	SDG	CAS #	Analyte	Initial Result	Qualification	Final Result	Qualification	Units	CH2M Reason Code
OMC-MW-625D 20C001-67 TM2885/TM2887 14797-55-8 Nitrate 0.14 0.14 J mg/L HT OMC-MW-625D 20C001-67 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-MW-625S 20C001-68 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-MW-625S 20C001-68 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-MW-5T-2D 20C001-59 TM2769 16887-00-6 Chloride 130 130 J- mg/L MT OMC-ST-MW-1D 20C001-59 TM2769 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L MS MS MS LL O.05 UJ mg/L MS LL D MS LL D .05 U 0.05 UJ mg/L MT MS LL </td <td>OMC-MW-624S</td> <td>20CO01-53</td> <td>TM2704</td> <td>TOC</td> <td>Total Organic Carbon</td> <td>1.7</td> <td></td> <td>1.7</td> <td>U</td> <td>mg/L</td> <td>EB, FB, MB</td>	OMC-MW-624S	20CO01-53	TM2704	TOC	Total Organic Carbon	1.7		1.7	U	mg/L	EB, FB, MB
OMC-MW-625D 20C001-67 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-MW-625S 20C001-68 TM2885/TM2887 14797-65-0 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-625S 20C001-68 TM2865/TM2887 14797-65-0 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-5T-2D 20C001-59 TM2769 16887-00-6 Chloride 130 130 J- mg/L MS-LCL OMC-ST-MW-1D 20C001-59 TM2769 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L MT OMC-ST-MW-1D 20C001-57 TM2885/TM2887 14797-65-0 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-1S 20C001-60 TM2769 74-82-8 Methane 15 B 15 U µg/L EB, Report at result OMC-ST-MW-2S 20C001-60 T	OMC-MW-624S-R	20CO01-54	TM2704	TOC	Total Organic Carbon	1.6		1.6	U	mg/L	EB, FB, MB
OMC-MW-625S 20C001-68 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-MW-625S 20C001-68 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-MW-5T-2D 20C001-59 TM2769 16887-00-6 Chloride 130 130 J- mg/L MS-LCL OMC-MW-5T-2D 20C001-59 TM2769 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L MS/MSD-LCL OMC-ST-MW-1D 20C001-57 TM2885/TM2887 14797-65-0 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-1S 20C001-60 TM2769 74-82-8 Methane 15 B 15 U mg/L EB, Report at result OMC-ST-MW-2S 20C001-60 TM2769 14808-79-8 Sulfate 100 10 1- mg/L MS-LCL, RPD OMC-ST-MW-2S 20C001-60 TM2769	OMC-MW-625D	20CO01-67	TM2885/TM2887	14797-55-8	Nitrate	0.14		0.14	J	mg/L	HT
OMC-MW-625S 20C001-68 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-MW-ST-2D 20C001-59 TM2769 16887-00-6 Chloride 130 130 J mg/L MS <lcl< td=""> OMC-MW-ST-2D 20C001-59 TM2769 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L MS/MSD<lcl< td=""> OMC-ST-MW-1D 20C001-57 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-15 20C001-60 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-2S 20C001-60 TM2769 74-82-8 Methane 15 B 15 U μg/L EB, Report at result OMC-ST-MW-2S 20C001-60 TM2769 TOC Total Organic Carbon 4 4 U mg/L MS<lcl, rpd<="" td=""> OMC-ST-MW-3D 20C001-61 TM2885/TM</lcl,></lcl<></lcl<>	OMC-MW-625D	20CO01-67	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-MW-ST-2D 20C001-59 TM2769 16887-00-6 Chloride 130 130 J-mg/L MS <lcl< th=""> OMC-MW-ST-2D 20C001-59 TM2769 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L MS/MSD<lcl< td=""> OMC-ST-MW-1D 20C001-57 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-1S 20C001-58 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-2S 20C001-60 TM2769 14808-79-8 Sulfate 100 100 J-mg/L MS LB, Report at result OMC-ST-MW-2S 20C001-60 TM2769 14808-79-8 Sulfate 100 100 J-mg/L MS MS<td>OMC-MW-625S</td><td>20CO01-68</td><td>TM2885/TM2887</td><td>14797-55-8</td><td>Nitrate</td><td>0.05</td><td>U</td><td>0.05</td><td>UJ</td><td>mg/L</td><td>НТ</td></lcl<></lcl<>	OMC-MW-625S	20CO01-68	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	НТ
OMC-MW-ST-2D 20C001-59 TM2769 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L MS/MSD <lcl< th=""> OMC-ST-MW-1D 20C001-57 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-1S 20C001-58 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-2S 20C001-60 TM2769 74-82-8 Methane 15 B 15 U µg/L EB, Report at result OMC-ST-MW-2S 20C001-60 TM2769 14808-79-8 Sulfate 100 Jo Jo mg/L MS-LCL, RPD OMC-ST-MW-2S 20C001-60 TM2769 TOC Total Organic Carbon 4 4 U mg/L MB OMC-ST-MW-3D 20C001-61 TM2885/TM2887 14797-65-0 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887</lcl<>	OMC-MW-625S	20CO01-68	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	НТ
OMC-ST-MW-1D 20C001-57 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-1S 20C001-58 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-2S 20C001-60 TM2769 74-82-8 Methane 15 B 15 U µg/L EB, Report at result OMC-ST-MW-2S 20C001-60 TM2769 14808-79-8 Sulfate 100 100 J- mg/L MS-LCL, RPD OMC-ST-MW-2S 20C001-60 TM2769 TOC Total Organic Carbon 4 4 U mg/L MB OMC-ST-MW-3D 20C001-61 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887<	OMC-MW-ST-2D	20CO01-59	TM2769	16887-00-6	Chloride	130		130	J-	mg/L	MS <lcl< td=""></lcl<>
OMC-ST-MW-1S 20C001-58 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-2S 20C001-60 TM2769 74-82-8 Methane 15 B 15 U µg/L EB, Report at result OMC-ST-MW-2S 20C001-60 TM2769 14808-79-8 Sulfate 100 100 J- mg/L MS-LCL, RPD OMC-ST-MW-2S 20C001-60 TM2769 TOC Total Organic Carbon 4 4 U mg/L MB OMC-ST-MW-3D 20C001-61 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3D 20C001-63 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887	OMC-MW-ST-2D	20CO01-59	TM2769	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	MS/MSD <lcl< td=""></lcl<>
OMC-ST-MW-2S 20C001-60 TM2769 74-82-8 Methane 15 B 15 U µg/L EB, Report at result OMC-ST-MW-2S 20C001-60 TM2769 14808-79-8 Sulfate 100 100 J-mg/L MS <lcl, rpd<="" td=""> OMC-ST-MW-2S 20C001-60 TM2769 TOC Total Organic Carbon 4 4 U mg/L MB OMC-ST-MW-3D 20C001-61 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-8 Nitrate 1.1 1.1 J mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-0</lcl,>	OMC-ST-MW-1D	20CO01-57	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	НТ
OMC-ST-MW-2S 20C001-60 TM2769 14808-79-8 Sulfate 100 100 J-mg/L MS <lcl, rpd<="" th=""> OMC-ST-MW-2S 20C001-60 TM2769 TOC Total Organic Carbon 4 4 U mg/L MB OMC-ST-MW-3D 20C001-61 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-55-8 Nitrate 1.1 1.1 J mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-55-8 <t< td=""><td>OMC-ST-MW-1S</td><td>20CO01-58</td><td>TM2885/TM2887</td><td>14797-65-0</td><td>Nitrite</td><td>0.05</td><td>U</td><td>0.05</td><td>UJ</td><td>mg/L</td><td>НТ</td></t<></lcl,>	OMC-ST-MW-1S	20CO01-58	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	НТ
OMC-ST-MW-2S 20C001-60 TM2769 TOC Total Organic Carbon 4 4 U mg/L MB OMC-ST-MW-3D 20C001-61 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-65 <t< td=""><td>OMC-ST-MW-2S</td><td>20CO01-60</td><td>TM2769</td><td>74-82-8</td><td>Methane</td><td>15</td><td>В</td><td>15</td><td>U</td><td>μg/L</td><td>EB, Report at result</td></t<>	OMC-ST-MW-2S	20CO01-60	TM2769	74-82-8	Methane	15	В	15	U	μg/L	EB, Report at result
OMC-ST-MW-3D 20C001-61 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-55-8 Nitrate 1.1 1.1 J mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-65	OMC-ST-MW-2S	20CO01-60	TM2769	14808-79-8	Sulfate	100		100	J-	mg/L	MS <lcl, rpd<="" td=""></lcl,>
OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S <t< td=""><td>OMC-ST-MW-2S</td><td>20CO01-60</td><td>TM2769</td><td>TOC</td><td>Total Organic Carbon</td><td>4</td><td></td><td>4</td><td>U</td><td>mg/L</td><td>MB</td></t<>	OMC-ST-MW-2S	20CO01-60	TM2769	TOC	Total Organic Carbon	4		4	U	mg/L	MB
OMC-ST-MW-3S 20C001-62 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-55-8 Nitrate 1.1 1.1 J mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-5D 20C001-65 TM2769 TOC Total Organic Carbon 4.8 4.8 U mg/L MB OMC-W-5 20C001-55 TM2769 <	OMC-ST-MW-3D	20CO01-61	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-55-8 Nitrate 1.1 1.1 J mg/L HT OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2769 TOC Total Organic Carbon 4.8 4.8 U mg/L MB OMC-W-5 20C001-55 TM2769 T4-82-8 Methane 74 B 74 J µg/L FD>RPD OMC-W-5-R 20C001-55 TM2769 T4-82-8 Methane 53 B 53 J µg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 TOC Tota	OMC-ST-MW-3S	20CO01-62	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	НТ
OMC-ST-MW-4D 20C001-63 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-65 TM2769 TOC Total Organic Carbon 4.8 4.8 U mg/L MB OMC-W-5 20C001-55 TM2769 74-82-8 Methane 74 B 74 J μg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 74-82-8 Methane 53 B 53 J μg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 74-82-8 Methane 53 B 53 J μg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 TOC	OMC-ST-MW-3S	20CO01-62	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-55-8 Nitrate 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-5D 20C001-65 TM2769 TOC Total Organic Carbon 4.8 4.8 U mg/L MB OMC-W-5 20C001-55 TM2769 74-82-8 Methane 74 B 74 J µg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 74-82-8 Methane 53 B 53 J µg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 74-82-8 Methane 53 B 53 J µg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-EB-120319 20C001-71 TM2704 ALK Alkalinity	OMC-ST-MW-4D	20CO01-63	TM2885/TM2887	14797-55-8	Nitrate	1.1		1.1	J	mg/L	HT
OMC-ST-MW-4S 20C001-64 TM2885/TM2887 14797-65-0 Nitrite 0.05 U 0.05 UJ mg/L HT OMC-ST-MW-5D 20C001-65 TM2769 TOC Total Organic Carbon 4.8 4.8 U mg/L MB OMC-W-5 20C001-55 TM2769 74-82-8 Methane 74 B 74 J μg/L FD>RPD OMC-W-5 20C001-55 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-W-5-R 20C001-56 TM2769 74-82-8 Methane 53 B 53 J μg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-EB-120319 20C001-71 TM2704 ALK Alkalinity 1.9 J 5 U mg/L MB	OMC-ST-MW-4D	20CO01-63	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-ST-MW-5D 20C001-65 TM2769 TOC Total Organic Carbon 4.8 4.8 U mg/L MB OMC-W-5 20C001-55 TM2769 74-82-8 Methane 74 B 74 J μg/L FD>RPD OMC-W-5 20C001-55 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-W-5-R 20C001-56 TM2769 74-82-8 Methane 53 B 53 J μg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-EB-120319 20C001-71 TM2704 ALK Alkalinity 1.9 J 5 U mg/L MB	OMC-ST-MW-4S	20CO01-64	TM2885/TM2887	14797-55-8	Nitrate	0.05	U	0.05	UJ	mg/L	HT
OMC-W-5 20C001-55 TM2769 74-82-8 Methane 74 B 74 J μg/L FD>RPD OMC-W-5 20C001-55 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-W-5-R 20C001-56 TM2769 74-82-8 Methane 53 B 53 J μg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-EB-120319 20C001-71 TM2704 ALK Alkalinity 1.9 J 5 U mg/L MB	OMC-ST-MW-4S	20CO01-64	TM2885/TM2887	14797-65-0	Nitrite	0.05	U	0.05	UJ	mg/L	HT
OMC-W-5 20C001-55 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-W-5-R 20C001-56 TM2769 74-82-8 Methane 53 B 53 J μg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-EB-120319 20C001-71 TM2704 ALK Alkalinity 1.9 J 5 U mg/L MB	OMC-ST-MW-5D	20CO01-65	TM2769	TOC	Total Organic Carbon	4.8		4.8	U	mg/L	MB
OMC-W-5-R 20C001-56 TM2769 74-82-8 Methane 53 B 53 J μg/L FD>RPD OMC-W-5-R 20C001-56 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-EB-120319 20C001-71 TM2704 ALK Alkalinity 1.9 J 5 U mg/L MB	OMC-W-5	20CO01-55	TM2769	74-82-8	Methane	74	В	74	J	μg/L	FD>RPD
OMC-W-5-R 20C001-56 TM2769 TOC Total Organic Carbon 3.9 3.9 U mg/L MB OMC-EB-120319 20C001-71 TM2704 ALK Alkalinity 1.9 J 5 U mg/L MB	OMC-W-5	20CO01-55	TM2769	TOC	Total Organic Carbon	3.9		3.9	U	mg/L	MB
OMC-EB-120319 20C001-71 TM2704 ALK Alkalinity 1.9 J 5 U mg/L MB	OMC-W-5-R	20CO01-56	TM2769	74-82-8	Methane	53	В	53	J	μg/L	FD>RPD
,	OMC-W-5-R	20CO01-56	TM2769	TOC	Total Organic Carbon	3.9		3.9	U	mg/L	MB
	OMC-EB-120319	20CO01-71	TM2704	ALK	Alkalinity	1.9	J	5	U	mg/L	MB
OMC-EB-120319 20C001-71 TM2704 74-82-8 Methane 4.3 JB 10 U μg/L MB	OMC-EB-120319	20CO01-71	TM2704	74-82-8	Methane	4.3	JB	10	U	μg/L	MB
OMC-FB-120319 20C001-72 TM2704 ALK Alkalinity 1.8 J 5 U mg/L MB	OMC-FB-120319	20CO01-72	TM2704	ALK	Alkalinity	1.8	J	5	U	mg/L	MB
OMC-FB-120319 20C001-72 TM2704 74-82-8 Methane 3.8 JB 10 U μg/L MB	OMC-FB-120319	20CO01-72	TM2704	74-82-8	Methane	3.8	JB	10	U	μg/L	MB

EB = equipment blank; FB = Field Blank; MB = method blank; HT= hold time; FD = field duplicate; MS = matrix spike; MSD = matrix spike duplicate; RPD = relative percent difference;

LCL = lower control limit

Attachment 2 ESAT Validation Narratives

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V SUPERFUND DIVISION

DATE:							
SUBJECT:	Review of Data Received for Review on: December 26, 2019						
FROM:	Timothy Prendiville, Supervisor (SR-6J) Science and Quality Assurance Section						
TO:	ΓΟ: Data User: <u>Jacobs</u> Email address: <u>kaitlin.ma@jacobs.com</u>						
Electronic an	d Manual Validation for Region 5						
We have revie	ewed the data for the following case:						
Site Name: _C	Outboard Marine Corp. (IL)						
Case No: <u>486</u>	62MA No:N/A SDG No: _ETFG3						
Number and T	Type of Samples: 20 waters (20 low level VOA, 4 Aroclors)						
Sample Numbers: ETFG3, G4, G7 - G9, H0, H1, J1, J2, K2 - K7, L6, L7, M6, M7, N0							
Laboratory:	Shealy Environmental Services, Inc. Hours for Review:						
Following are	our findings:						

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative

Mail Code: SA-5J

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Case No: 48662
Site Name: Outboard Marine Corp. (IL)
Page 2 of 7
SDG No: ETFG3
Laboratory: Shealy

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) samples; ETFG3, ETFG4, ETFG7 - ETFG9, ETFH0, ETFH1, ETFJ1, ETFJ2, ETFK2 - ETFK7, ETFL6, ETFL7, ETFM6, ETFM7 and ETFN0 were shipped to Shealy Environmental Services (EQI) located in West Columbia, SC. The samples were collected on December 2nd through December 4th, 2019. All samples were received on December 5th, 2019 intact and properly cooled.

Sixteen (16) samples; ETFG3, ETFG4, ETFG7 - ETFG9, ETFH0, ETFH1, ETFJ1, ETFJ2, ETFK2 - ETFK7 and ETFN0, were analyzed for only the low level volatile analytes. Four (4) samples; ETFL6, ETFL7, ETFM6 and ETFM7, were analyzed for the low level volatile and aroclor analytes.

All samples were analyzed according to CLP SOW SOM02.4 (10/2016). The data package was reviewed according to the January 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 ESAT Organic CLP Validation SOP.

Sample ETFG8 was designated by the samplers to be used for laboratory QC, i.e. MS/MSD analyses. ETFG8 was used as parent sample for the volatile MS/MSD. No MS/MSD were analyzed for the aroclor analyses due to insufficient sample volume.

No samples were identified as trip blanks, equipment blanks or field blanks. Samples ETFG9/ETFH0 and ETFL6/ETFL7 were identified as field duplicate pairs.

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Case No: 48662
Site Name: Outboard Marine Corp. (IL)

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SDG No: ETFG3
Laboratory: Shealy

1. PRESERVATION AND HOLDING TIMES

No problems found.

2. GAS CHROMATOGRAPH/MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

No problems found.

3. INITIAL CALIBRATION

No problems found.

4. INITIAL CALIBRATION VERIFICATION

No problems found.

5. CONTINUING CALIBRATION

The following volatile samples are associated with a closing CCV with %Difference exceeding criteria. Detects are qualified as estimated J. Non-detects are qualified as estimated UJ.

ETFG3, ETFG4, ETFG7, ETFG8, ETFG8MSD, ETFH1, ETFJ2, ETFK2, ETFK3, ETFK4, ETFK5, ETFK6, ETFK7, ETFL6, ETFL7, ETFM6, VBLKFG Acetone

6. BLANKS

No problems found.

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

The following volatile samples have DMC/surrogate percent recoveries greater than the primary maximum criteria. Detects are qualified as estimated J+. Non-detects are not qualified.

ETFG3, ETFG4, ETFG7, ETFG8, ETFH1, ETFJ2, ETFK2, ETFK4, ETFK5, ETFK6, ETFK7, ETFL6, ETFL7, ETFM6 Vinyl chloride

ETFG8MS

Vinyl chloride, 1,1-Dichloroethene, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene

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Case No: 48662
Site Name: Outboard Marine Corp. (IL)

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SDG No: ETFG3
Laboratory: Shealy

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample ETFG8 was designated by the samplers to be used for laboratory QC, i.e. MS/MSD analyses. ETFG8 was used as parent sample for the volatile MS/MSD. No MS/MSD were analyzed for the aroclor analyses due to insufficient sample volume.

No problems found.

9. FLORISIL CARTRIDGE PERFORMANCE CHECK

Not required for this analysis.

10. CLEANUP PROCEDURES

No problems found.

11. LABORATORY CONTROL SAMPLE

No problems found.

12. INTERNAL STANDARD

No problems found.

13. TARGET ANALYTE IDENTIFICATION

The following volatile samples have analyte results greater than the upper limit of calibration range. Samples were re-analyzed at further dilution to bring the detections within the calibration ranges.

ETFG9, ETFH0 Vinyl chloride, cis-1,2-Dichloroethene

ETFJ1 cis-1,2-Dichloroethene, Trichloroethene

The following aroclor samples have analyte results greater than the upper limit of calibration range. Samples were re-analyzed at dilution to bring the detections within the calibration ranges.

ETFM7 Aroclor-1242

The relative percent differences between analyte results for the following aroclor samples are greater than 25%. Detects with results greater than 10% the CRQL are qualified as estimated J.

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Case No: 48662
Site Name: Outboard Marine Corp. (IL)

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SDG No: ETFG3
Laboratory: Shealy

ETFM6, ETFM7 Aroclor-1242

14. REPORTED CONTRACT QUANTITATION LIMIT

The following volatile samples have analyte results greater than or equal to detection limit (MDL) and below the contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ETFG7

Vinyl chloride, 1,1-Dichloroethane, cis-1,2-Dichloroethene

ETFG9, ETFK2

1.1-Dichloroethene

ETFH0

1,1-Dichloroethene, trans-1,2-Dichloroethene

ETFH1, ETFK3, ETFK6

Vinyl chloride, cis-1,2-Dichloroethene

ETFJ1

trans-1,2-Dichloroethene

ETFK7

Vinyl chloride, Methyl acetate, cis-1,2-Dichloroethene, Trichloroethene

ETKM6, ETFN0

Vinyl chloride

ETFM7

cis-1,2-Dichloroethene, Benzene, Ethylbenzene, o-Xylene, Isopropylbenzene

VBLKJG

1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

The following aroclor samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ALCS90

Aroclor-1260

ETFM6

Aroclor-1242

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Case No: 48662
Site Name: Outboard Marine Corp. (IL)

Page 6 of 7
SDG No: ETFG3
Laboratory: Shealy

15. TENTATIVELY IDENTIFIED COMPOUNDS

Sample results are identified in the separate Data Validation Report titled 'Tentatively Identified Compounds'. The manually reviewed report is titled '48662 sdg ETFG3".

The following volatile sample reported a common laboratory contaminant TIC below the NFG criteria of $100 \,\mu\text{g/L}$. The TIC is qualified as a non-detect U and removed from the EXES TIC Report and Sample Summary Report.

CAS No. 556-67-2 Cyclotetrasiloxane, Octamethyl ETFK2

16. SYSTEM PERFORMANCE

No problems found.

17. FIELD QC SAMPLES

No samples were identified as trip blank, equipment blank or field blanks. Samples ETFG9/ETFH0 and ETFL6/ETFL7 were identified as field duplicate pairs. No target compounds or TICs were detected in field duplicate pair ETFL6/ETFL7. The sample results and RPDs for field duplicate pair ETFG9/ETFH0 are summarized in the following table:

CLP Sample No.	ETFG9		ETFH0		
Sample Identifier:	OMC-MV	V-602D	OMC-MW	/-602D-R	
Location:	MW-602I)	MW-602D)	
Collection Date/Time:	12/04/201	9 09:50	12/04/201	9 09:56	RPD
Dilution factor:	10		10		
Units:	μg/L		μg/L		%
Vinyl chloride	4800	Е	4700	E	2.1
1,1-Dichloroethene	23	J	23	J	0
trans-1,2-Dichloroethene	50		43	J	15
cis-1,2-Dichloroethene	11000	Е	11000	E	0
	ETFG9D	L	ETFH0D	L	
Dilution factor:	100		100		
Vinyl chloride	5600		5500		1.8
cis-1,2-Dichloroethene	11000		10000		9.5

18. OVERALL ASSESSMENT

Manual integrations were performed for some samples. These manual integrations were reviewed by the reviewer and appear to be acceptable without additional qualifications.

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Case No: 48662
Site Name: Outboard Marine Corp. (IL)

Page 7 of 7
SDG No: ETFG3
Laboratory: Shealy

Validation Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the results may be biased high.
J-	The result is an estimated quantity, but the results may be biased low.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
С	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V SUPERFUND DIVISION

DATE:				
SUBJECT:		on: <u>December 26, 2019</u>		
FROM:	Timothy Prendiville, Science and Quality			
TO:	Data User: Email Address:	<u>Jacobs</u> <u>Kaitlin.Ma@jacobs.com</u>		
Electronic an	nd Manual Validation	n for Region 5		
We have revie	ewed the data for the f	following case:		
SITE Name:	Outboard Mari	ne Corporation (IL)		
Case No: <u>486</u>	662 MA N	No:	SDG No:	ETFF5
Number and T	Гуре of Samples: 20 v	waters (20 Low/Medium Vol	atiles, 12 Arocl	ors)
Sample Numb	pers: <u>ETFF2 – ETF</u> <u>ETFN2, ETF</u>	FF9, ETFG0 – ETFG2, ETFJ <u>N3</u>	3, ETFJ4, ETF	L1 – ETFL5
Laboratory:	Shealy Environmenta	al Services, Inc. (EQI)	Hrs. for Rev	iew:
Following are	our findings:			

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative

Mail Code: SA-5J

Page 2 of 9
Case No: 48662
Site Name: Outboard Marine Corporation (IL)
SDG No: ETFF5
Laboratory: EQI

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) preserved water samples; ETFF2 thru ETFF9, ETFG0 thru ETFG2, ETFJ3, ETFJ4, ETFL1 thru ETFL5, ETFN2 and ETFN3, were shipped to Shealy Environmental Services, Inc (EQI) located in West Columbia, SC. The samples were collected December 2-3, 2019 and received intact December 4-5, 2019. The aroclor portions of four (4) samples; ETFF7, ETFF8, ETFN2 and ETFN3, arrived with a cooler temperature of 7.0 °C. All other samples arrived with temperatures below 6°C.

Eight (8) samples; ETFF2 thru ETFF4, ETFF6, ETFF9, and ETFG0 thru ETFG2, were analyzed according to CLP SOW SOM02.4 (10/2016) for only the low/medium level volatile target analytes. Twelve (12) samples; ETFF5, ETFF7, ETFF8, ETFJ3, ETFJ4, ETFL1 thru ETFL5, ETFN2 and ETFN3 were analyzed according to CLP SOW SOM02.4 (10/2016) for the low/medium level volatile and aroclor target analytes. The data package was reviewed according to the January 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 ESAT Organic CLP Validation SOP.

Sample ETFG1 was designated for laboratory QC, i.e. MS/MSD analyses for the volatile analyses. No MS/MSD analyses was requested for the aroclor samples.

None of the samples in this SDG were identified as a trip blank. Sample ETFN2 was identified as an equipment blank and sample ETFN3 as a field blank. Sample ETFF3 was identified as a replicate of sample ETFF2 and sample ETFL5 as a replicate of sample ETFL4.

Page 3 of 9
Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Site Name: Outboard Marine Corporation (IL)

1. PRESERVATION AND HOLDING TIMES

The following aroclor samples are received with shipping container temperatures greater than 6°C. Detects and nondetects are not qualified for this noncompliance.

ETFF7, ETFF8, ETFN2, ETFN3

2. GAS CHROMATOGRAPH/MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

No problems found.

3. INITIAL CALIBRATION

No problems found.

4. INITIAL CALIBRATION VERIFICATION

No problems found.

5. CONTINUING CALIBRATION

The following volatile samples are associated with an opening or closing CCV with % Difference exceeding criteria. Detects are qualified as estimated J. Nondetects are qualified as estimated UJ.

ETFF2, ETFF3, ETFG1, ETFG1MS, ETFG1MSD, ETFJ3, ETFN2, ETFN3, VBLKEJ, VBLKGZ Acetone

6. BLANKS

The following volatile sample reported a contamination below the CRQL. The associated field QC samples (ETFN2 and ETFN3) reported the same contamination. Detects are qualified U as a nondetect. Sample concentration is reported at the CQL.

ETFG1DL Toluene

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

The following volatile samples have DMC/surrogate percent recoveries greater than the primary maximum criteria. Detects are qualified as estimated J+. Nondetects are not qualified.

Page 4 of 9 Case No: 48662 SDG No: ETFF5 Site Name: Outboard Marine Corporation (IL) Laboratory: EQI

ETFF2, ETFF3, ETFF3DL, ETFF4, ETFF5, ETFF6, ETFG1DL

Vinyl chloride

ETFF2DL. ETFN3

Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Bromomethane, Chloroethane, Carbon disulfide, Trichloroethene, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample ETFG1 was designated for laboratory QC, i.e. MS/MSD analyses for the volatile analyses. No MS/MSD analyses was requested for the aroclor samples.

The volatile relative percent difference (RPD) between the following matrix spike and matrix spike duplicate recoveries is outside criteria. Detects in the unspiked sample are qualified as estimated J. Nondetects in the unspiked sample are not qualified.

ETFG1MS, ETFG1MSD Benzene

The following volatile matrix spike/ matrix spike duplicate samples have percent recoveries greater than the primary maximum criteria. Detects in the unspiked sample are qualified as estimated J. Nondetects in the unspiked sample are not qualified.

ETFG1MSD Benzene

9. FLORISIL CARTRIDGE PERFORMANCE CHECK

Not required for these analyses.

10. **CLEANUP PROCEDURES**

Not required for these analyses.

11. LABORATORY CONTROL SAMPLE

No problems found.

12. INTERNAL STANDARD

No problems found.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Date: January 3, 2020

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 5 of 9
SDG No: ETFF5
Laboratory: EQI

13. TARGET ANALYTE IDENTIFICATION

No problems found.

14. REPORTED CONTRACT QUANTITATION LIMIT

The following volatile samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ETFF2, ETFF3

trans-1,2-Dichloroethene

ETFF4, ETFL2

Vinyl chloride, cis-1,2-Dichloroethene

ETFF7

Vinyl chloride, Benzene

ETFF8

Vinyl chloride, 1,1-Dichloroethane, cis-1,2-Dichloroethene

ETFF9, ETFG1, ETFG1MS, ETFL1

Vinyl chloride

ETFJ3

1,1-Dichloroethene, trans-1,2-Dichloroethene

ETFJ4

trans-1,2-Dichloroethene, cis-1,2-Dichloroethene

ETFL3

1,1-Dichloroethane, cis-1,2-Dichloroethene

ETFN2

2-Butanone, Toluene

ETFN3

Acetone, 2-Butanone, Toluene

VBLKJG

1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

Page 6 of 9
Case No: 48662
Site Name: Outboard Marine Corporation (IL)
SDG No: ETFF5
Laboratory: EQI

The following aroclor samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ALCS90 Aroclor-1260

15. TENTATIVELY IDENTIFIED COMPOUNDS

Sample results are identified in the separate Data Validation Report titled 'Tentatively Identified Compounds'. The manually reviewed report is titled 'NFG TIC.OUTBOARD MARINE CORP. Project.48662.EPW14035.ETFF5.rtf'.

16. SYSTEM PERFORMANCE

No problems found.

17. FIELD QC SAMPLES

None of the samples in this SDG were identified as a trip blank. Sample ETFN2 was identified as an equipment blank and sample ETFN3 as a field blank. The results are summarized in the following table:

QC Sample Type:	Equipment Blank	Field Blank			
CLP Sample ID:	ETFN2	ETFN3			
Location:	Equipment Blank	Field Blank			
Sample Identifier:	OMC-EB-120319	OMC-FB-120319			
Collection Date/Time:	12/03/2019 10:05	12/03/2019 09:55			
VOA Receipt Date, Temp	12/05/2019 10:40	12/05/2019 10:40			
PCB Receipt Date, Temp	12/04/2019 11:06	12/04/2019 11:06			
Units:	μg/L	μg/L			
Acetone	13	6.5 J			
2-Butanone	6.8 J	8.4 J			
Toluene	2.2 J	2.1 J			
Associated field samples:	ETFF2, ETFF2DL, ETFF3, E	TFF3DL, ETFF4, ETFF5,			
	ETFF6, ETFF7, ETFF8, ETFF9, ETFG0, ETFG1,				
	ETFG1DL, ETFG1MS, ETFG	G1MSD, ETFG2, ETFJ3,			
	ETFJ3DL, ETFJ4, ETFL1, E	TFL2, ETFL3, ETFL4, ETFL5			

Sample ETFF3 was identified as a replicate of sample ETFF2 and sample ETFL5 as a replicate of sample ETFL4. No detections were reported for samples ETFL4 and ETFL5. The results and RPDs are summarized in the following table:

Page 7 of 9 SDG No: ETFF5 Laboratory: EQI

Case No: 48662 Site Name: Outboard Marine Corporation (IL)

CLP Sample No.	ETFF2	ETFF3	
Location:	MW-11D	MW-11D	
Sample Identifier:	OMC-MW-11D	OMC-MW-11D-R	
Collection Date/Time:	12/03/2019 10:50	12/03/2019 10:55	
VOA Receipt Date, Temp	12/05/2019 10:40	12/05/2019 10:40	RPDs
Units:	μg/L	μg/L	%
Dilution factor	1	1	
Vinyl chloride	1700 E	1600 E	6.1
1,1-Dichloroethene	6.2	6.1	1.6
Trans-1,2-Dichloroethene	3.2	2.7	16.9
Cis-1,2-Dichloroethene	2200 E	2300 E	4.4
No. of VOA TICs	2	1	
CLP Sample No.	ETFF2DL	ETFF3DL	
Dilution factor	10	10	
Vinyl chloride	1300	1100	16.7
Cis-1,2-Dichloroethene	1700	1500	12.5

18. OVERALL ASSESSMENT

The following samples have one or more target compounds with concentrations that exceed the volatile calibration range. Samples were properly diluted. Concentrations are reported from the dilutions with their associated dilution factor.

ETFF2, ETFF3, ETFJ3 Vinyl chloride, cis-1,2-Dichloroethene

ETFG1 Benzene

The following QC samples have one or more target compounds with concentrations that exceed the volatile calibration range. Detections are qualified as estimated J.

ETFG1MS, ETFG1MSD Benzene

Manual integrations were performed for some of the samples due to a "peak integrated by software incorrectly" according to the laboratory narrative. These manual integrations were reviewed by the reviewer and appear to be acceptable without additional qualifications.

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 8 of 9
SDG No: ETFF5
Laboratory: EQI

The following volatile samples reported a common laboratory contaminant TIC below the NFG criteria of $100 \,\mu\text{g/L}$. The TIC is qualified as a nondetect U and removed from the EXES TIC Report and Sample Summary Report.

CAS No. 556-67-2 Cyclotetrasiloxane, octamethyl-ETFF3, ETFG1

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Case No: 48662
SDG No: ETFF5
Site Name: Outboard Marine Corporation (IL)
Laboratory: EQI

Validation Data Qualifier Sheet

Qualifiers	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for and was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the results may be biased high.
J-	The result is an estimated quantity, but the results may be biased low.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
UJ	The analyte was analyzed for and was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
С	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V SUPERFUND DIVISION

DATE:					
SUBJECT:	Review of Data Received for Review on: <u>January 2, 2020</u>				
FROM:	Timothy Prendiville, Supervisor (SR-6J) Science and Quality Assurance Section				
TO:	Data User: Email Address:	<u>Jacobs</u> <u>Kaitlin.Ma@jacobs.com</u>			
Electronic and Manual Validation for Region 5					
We have reviewed the data for the following case:					
SITE Name: Outboard Marine Corporation (IL)					
Case No: <u>486</u>	62 MA N	o:	SDG No:	ETFK9	
Number and Type of Samples: <u>11 waters (11 Low/Medium Volatiles, 4 Aroclors)</u>					
Sample Numbers: <u>ETFK9</u> , <u>ETFL0</u> , <u>ETFL8</u> , <u>ETFL9</u> , <u>ETFM2</u> – <u>ETFM5</u> , <u>ETFM8</u> , <u>ETFM9</u> , <u>ETFN5</u>					
Laboratory:	Shealy Environmenta	l Services, Inc. (EQI)	Hrs. for Revie	ew:	
Following are our findings:					

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative

Mail Code: SA-5J

Page 2 of 6
Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 2 of 6
SDG No: ETFK9
Laboratory: EQI

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Eleven (11) preserved water samples; ETFK9, ETFL0, ETFL8, ETFL9, ETFM2 thru ETFM5, ETFM8, ETFM9 and ETFN5, were shipped to Shealy Environmental Services, Inc (EQI) located in West Columbia, SC. The samples were collected December 5-6, 2019 and received intact on December 7, 2019.

Seven (7) samples; ETFK9, ETFL0, ETFM4, ETFM5, ETFM8, ETFM9 and ETFN5, were analyzed according to CLP SOW SOM02.4 (10/2016) for only the low/medium level volatile target analytes. Four (4) samples; ETFL8, ETFL9, ETFM2 and ETFM3 were analyzed according to CLP SOW SOM02.4 (10/2016) for the low/medium level volatile and aroclor target analytes. The data package was reviewed according to the January 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 ESAT Organic CLP Validation SOP.

No sample was designated for laboratory QC, i.e. MS/MSD analyses. No MS/MSD analyses was conducted for this SDG.

None of the samples in this SDG were identified as field blanks. Sample ETFN5 was identified as a trip blank. Sample ETFL0 was identified as a replicate of sample ETFK9.

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 3 of 6
SDG No: ETFK9
Laboratory: EQI

1. PRESERVATION AND HOLDING TIMES

No problems found.

2. GAS CHROMATOGRAPH/MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

No problems found.

3. INITIAL CALIBRATION

No problems found.

4. INITIAL CALIBRATION VERIFICATION

No problems found.

5. CONTINUING CALIBRATION

The following volatile samples are associated with an opening or closing CCV with % Difference exceeding criteria. Detects are qualified as estimated J. Nondetects are qualified as estimated UJ.

ETFM8DL, ETFM9, VBLKHX Acetone

6. BLANKS

No problems found.

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

The following volatile samples have DMC/surrogate percent recoveries greater than the primary maximum criteria. Detects are qualified as estimated J+. Nondetects are not qualified.

ETFK9, ETFL0, ETFL8, ETFM3, ETFM8 Vinyl chloride

The following aroclor samples have surrogate percent recoveries greater than the primary maximum criteria but are less than or equal to the expanded maximum criteria. Detects are qualified as estimated J+. Nondetects are not qualified.

ETFL9, ETFL9DL

Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 4 of 6
SDG No: ETFK9
Laboratory: EQI

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No sample was designated for laboratory QC, i.e. MS/MSD analyses. No MS/MSD analyses was conducted for this SDG.

9. FLORISIL CARTRIDGE PERFORMANCE CHECK

Not required for these analyses.

10. CLEANUP PROCEDURES

No problems found.

11. LABORATORY CONTROL SAMPLE

No problems found.

12. INTERNAL STANDARD

No problems found.

13. TARGET ANALYTE IDENTIFICATION

No problems found.

14. REPORTED CONTRACT QUANTITATION LIMIT

The following volatile samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ETFL8

Vinyl chloride, trans-1,2-Dichloroethene

ETFL9, ETFM8, ETFM9 cis-1,2-Dichloroethene

VHBLK01

Acetone

The following aroclor samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 5 of 6
SDG No: ETFK9
Laboratory: EQI

ALCS62

Aroclor-1016, Aroclor-1260

ETFM2, ETFM3 Aroclor-1242

15. TENTATIVELY IDENTIFIED COMPOUNDS

No tentatively identified compounds (TICs) were reported for this SDG.

16. SYSTEM PERFORMANCE

No problems found.

17. FIELD QC SAMPLES

None of the samples in this SDG were identified as field blanks. Sample ETFN5 was identified as a trip blank. No target analytes (TCLs) or tentatively identified compounds (TICs) were reported for this sample.

Sample ETFL0 was identified as a replicate of sample ETFK9. No target analytes (TCLs) or tentatively identified compounds (TICs) were reported for these samples.

18. OVERALL ASSESSMENT

The following samples have one or more target compounds with concentrations that exceed the volatile calibration range. Samples were properly diluted. Concentrations are reported from the dilutions with their associated dilution factor.

ETFM8 Vinyl chloride

The following samples have one or more target compounds with concentrations that exceed the aroclor calibration range. Samples were properly diluted. Concentrations are reported from the dilutions with their associated dilution factor.

ETFL8, ETFL9 Aroclor-1242

Manual integrations were performed for some of the samples due to a "peak integrated by software incorrectly" according to the laboratory narrative. These manual integrations were reviewed by the reviewer and appear to be acceptable without additional qualifications.

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 6 of 6
SDG No: ETFK9
Laboratory: EQI

Validation Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for and was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the results may be biased high.
J-	The result is an estimated quantity, but the results may be biased low.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
UJ	The analyte was analyzed for and was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
С	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V SUPERFUND DIVISION

DATE:				
SUBJECT:	Review of Data Received for Review	on: <u>December 30, 2019</u>		
FROM:	Timothy Prendiville, Science and Quality	-		
TO:	Data User: Email Address:	<u>Jacobs</u> <u>Kaitlin.Ma@jacobs.com</u>		
Electronic and Manual Validation for Region 5				
We have reviewed the data for the following case:				
SITE Name:	Outboard Marin	ne Corporation (IL)		
Case No: <u>486</u>	662 MA N	To:	SDG No:	ETFM0
Number and T	Type of Samples: 6 wa	aters (3 Low/Medium Volatile	s, 4 Aroclors)	
Sample Numbers: <u>ETFJ8, ETFM0, ETFM4, ETFM5, ETFN1, ETFN4</u>				
Laboratory:	Shealy Environmenta	ll Services, Inc. (EQI)	Hrs. for Revie	ew:
Following are	our findings:			

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative Mail Code: SA-5J

Page 2 of 6
Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 2 of 6
SDG No: ETFM0
Laboratory: EQI

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Six (6) preserved water samples; ETFJ8, ETFM0, ETFM4, ETFM5, ETFN1 and ETFN4, were shipped to Shealy Environmental Services, Inc (EQI) located in West Columbia, SC. The samples were collected December 4-5, 2019 and received intact December 5-6, 2019.

Two (2) samples; ETFN1 and ETFN4, were analyzed according to CLP SOW SOM02.4 (10/2016) for only the low/medium level volatile target analytes. One (1) sample, ETFM0, was analyzed according to CLP SOW SOM02.4 (10/2016) for the low/medium level volatile and aroclor target analytes. Three (3) samples; ETFJ8, ETFM4 and ETFM5, were analyzed according to CLP SOW SOM02.4 (10/2016) for only the aroclor target analytes. The data package was reviewed according to the January 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 ESAT Organic CLP Validation SOP.

Sample ETFM0 was designated for laboratory QC, i.e. MS/MSD analyses for the volatile analyses.

Sample ETFN4 was identified as a trip blank. No samples were identified as either field blanks or field duplicates.

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 3 of 6
SDG No: ETFM0
Laboratory: EQI

1. PRESERVATION AND HOLDING TIMES

No problems found.

2. GAS CHROMATOGRAPH/MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

No problems found.

3. INITIAL CALIBRATION

No problems found.

4. INITIAL CALIBRATION VERIFICATION

No problems found.

5. CONTINUING CALIBRATION

No problems found.

6. BLANKS

No problems found.

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

No problems found.

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample ETFM0 was designated for laboratory QC, i.e. MS/MSD analyses for the volatile analyses.

No problems found.

9. FLORISIL CARTRIDGE PERFORMANCE CHECK

Not required for these analyses.

10. CLEANUP PROCEDURES

No problems found.

Reviewed by: Allison C Harvey / Techlaw-ESAT

Date: January 13, 2020

Page 4 of 6
Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 4 of 6
SDG No: ETFM0
Laboratory: EQI

11. LABORATORY CONTROL SAMPLE

No problems found.

12. INTERNAL STANDARD

No problems found.

13. TARGET ANALYTE IDENTIFICATION

The following aroclor samples have result difference between the two columns greater than 25%. Detects are qualified as estimated J.

ETFJ8, ETFJ8DL Aroclor-1242

14. REPORTED CONTRACT QUANTITATION LIMIT

The following volatile samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ETFM0, ETFM0MSD Vinyl chloride

ETFM0MS Vinyl chloride, cis-1,2-Dichloroethene

ETFN1 trans-1,2-Dichloroethene

ETFN1DL 1,1-Dichloroethene

VBLKJG 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene

The following aroclor samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ALCS62 Aroclor-1016, Aroclor-1260

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 5 of 6
SDG No: ETFM0
Laboratory: EQI

ALCS90 Aroclor-1260

ETFM4, ETFM5 Aroclor-1242

15. TENTATIVELY IDENTIFIED COMPOUNDS

No tentatively identified compounds were found in this SDG.

16. SYSTEM PERFORMANCE

No problems found.

17. FIELD QC SAMPLES

Sample ETFN4 was identified as a trip blank. No target analytes (TCLs) or tentatively identified compounds (TICs) were detected in the sample. No samples were identified as either field blanks or field duplicates.

18. OVERALL ASSESSMENT

The following volatile samples have one or more target compounds with concentrations that exceed the volatile calibration range. Samples were properly diluted. Concentrations are reported from the dilutions with their associated dilution factor.

ETFN1 cis-1,2-Dichloroethene

The following aroclor samples have one or more target compounds with concentrations that exceed the volatile calibration range. Samples were properly diluted. Concentrations are reported from the dilutions with their associated dilution factor.

ETFJ8 Aroclor-1242

Manual integrations were performed for some of the samples due to a "peak integrated by software incorrectly" according to the laboratory narrative. These manual integrations were reviewed by the reviewer and appear to be acceptable without additional qualifications.

Page 6 of 6
Case No: 48662
SDG No: ETFM0
Site Name: Outboard Marine Corporation (IL)
Laboratory: EQI

Validation Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for and was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the results may be biased high.
J-	The result is an estimated quantity, but the results may be biased low.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
UJ	The analyte was analyzed for and was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
С	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V SUPERFUND DIVISION

DATE:				
	Review of Data Received for Review	on: <u>December 30, 2019</u>		
FROM:	Timothy Prendiville, Science and Quality A	* '		
TO:	Data User: Email Address:	<u>Jacobs</u> <u>Kaitlin.Ma@jacobs.com</u>		
Electronic an	d Manual Validation	for Region 5		
We have revie	wed the data for the fo	ollowing case:		
SITE Name: _	Outboard Marin	e Corporation (IL)		
Case No: <u>486</u>	62 MA N	o:	SDG No:	ETFM1
Number and T	Type of Samples: 20 w	raters (20 Low/Medium Volat	iles, 1 Aroclor)	!
Sample Numb	ers: <u>ETFG5, ETFC</u> <u>ETFK1, ETF</u> k	56, ETFH2 – ETFH9, ETFJ0, K8, ETFM1	ETFJ5 – ETFJ	9, ETFK0,
Laboratory:	Shealy Environmenta	l Services, Inc. (EQI)	Hrs. for Revie	ew:
Following are	our findings:			

CC: Howard Pham

Region 5 ESAT Contracting Officer's Representative

Mail Code: SA-5J

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 2 of 7
SDG No: ETFM1
Laboratory: EQI

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) preserved water samples; ETFG5, ETFG6, ETFH2 thru ETFH9, ETFJ0, ETFJ5 thru ETFJ9, ETFK0, ETFK1, ETFK8 and ETFM1, were shipped to Shealy Environmental Services, Inc (EQI) located in West Columbia, SC. The samples were collected December 4th – 6th, 2019 and received intact on December 5th and 7th, 2019.

One (1) sample, ETFM1, was analyzed according to CLP SOW SOM02.4 (10/2016) for the low/medium level volatile and aroclor target analytes. The remaining nineteen (19) samples were analyzed according to CLP SOW SOM02.4 (10/2016) for only the low/medium level volatile target analytes. The data package was reviewed according to the January 2017 NFG for SOM02.4 (EPA-540-R-2017-002) and the Region 5 ESAT Organic CLP Validation SOP.

Sample ETFM1 was designated for laboratory QC, i.e. MS/MSD analyses for the volatile analyses.

None of the samples in this SDG were identified as trip blanks or field blanks. Sample ETFH7 was identified as a replicate of sample ETFH6 and sample ETFJ7 as a replicate of sample ETFJ6.

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 3 of 7
SDG No: ETFM1
Laboratory: EQI

1. PRESERVATION AND HOLDING TIMES

No problems found.

2. GAS CHROMATOGRAPH/MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

No problems found.

3. INITIAL CALIBRATION

No problems found.

4. INITIAL CALIBRATION VERIFICATION

No problems found.

5. CONTINUING CALIBRATION

The following volatile samples are associated with an opening or closing CCV with % Difference exceeding criteria. Detects are qualified as estimated J. Nondetects are qualified as estimated UJ.

ETFH4DL, ETFH5DL, ETFH8, ETFH8DL, ETFK0, ETFK0DL, ETFK1, VBLKHX, VBLKIQ, VHBLK01
Acetone

6. BLANKS

No problems found.

7. DEUTERATED MONITORING COMPOUNDS / SURROGATES

The following volatile samples have DMC/surrogate percent recoveries greater than the primary maximum criteria. Detects are qualified as estimated J+. Nondetects are not qualified.

ETFH2, ETFH4, ETFH5, ETFJ0, ETFJ6, ETFJ7, ETFK8 Vinyl chloride

ETFJ9

Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Bromomethane, Chloroethane, Carbon disulfide, Trichloroethene, Toluene, Tetrachloroethene, Ethylbenzene, o-Xylene, m,p-Xylene, Styrene, Isopropylbenzene

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 4 of 7
SDG No: ETFM1
Laboratory: EQI

8. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample ETFM1 was designated for laboratory QC, i.e. MS/MSD analyses for the volatile analyses.

No problems found.

9. FLORISIL CARTRIDGE PERFORMANCE CHECK

Not required for these analyses.

10. CLEANUP PROCEDURES

No problems found.

11. LABORATORY CONTROL SAMPLE

No problems found.

12. INTERNAL STANDARD

No problems found.

13. TARGET ANALYTE IDENTIFICATION

No problems found.

14. REPORTED CONTRACT QUANTITATION LIMIT

The following volatile samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ETFG5, ETFK8
Acetone, cis-1,2-Dichloroethene, 2-Butanone

ETFG6, ETFH3 Vinyl chloride

ETFH2, ETFH9, ETFK0 trans-1,2-Dichloroethene

ETFH4 1,1-Dichloroethene, 2-Butanone

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 5 of 7
SDG No: ETFM1
Laboratory: EQI

ETFH6, ETFH7

1,1-Dichloroethene, trans-1,2-Dichloroethene

ETFH8

1,1-Dichloroethene, trans-1,2-Dichloroethene, 1,1-Dichloroethane

ETFH8DL, ETFK0DL

1,1-Dichloroethene, Trichloroethene

ETFJ5

Methylene chloride, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene

ETFJ8

1,1-Dichloroethene, trans-1,2-Dichloroethene

The following aroclor samples have analyte results greater than or equal to method detection limit (MDL) and below contract required quantitation limit (CRQL). Detects are qualified as estimated J.

ALCS90 Aroclor-1260

15. TENTATIVELY IDENTIFIED COMPOUNDS

Sample results are identified in the separate Data Validation Report titled 'Tentatively Identified Compounds'. The manually reviewed report is titled 'NFG TIC.OUTBOARD MARINE CORP. Project.48662.EPW14035.ETFM1.rtf'.

16. SYSTEM PERFORMANCE

No problems found.

17. FIELD QC SAMPLES

None of the samples in this SDG were identified as trip blanks or field blanks. Sample ETFH7 was identified as a replicate of sample ETFH6 and sample ETFJ7 as a replicate of sample ETFJ6. No target analytes (TCLs) or tentatively identified compounds (TICs) were detected in samples ETFJ6 and ETFJ7. The results and RPDs for samples ETFH6 and ETFH7 are summarized in the following table:

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 6 of 7
SDG No: ETFM1
Laboratory: EQI

CLP Sample No.	ETFH6		ETFH7		
Location:	MW-605	D	MW-605I)	
Sample Identifier:	OMC-M	W-605D	OMC-MV	V-605D-R	
Collection Date/Time:	12/05/20	19 13:41	12/05/201	9 13:44	
VOA Receipt Date, Temp	12/07/20	19 09:12	12/07/201	9 09:12	RPDs
Units:	μg/L		μg/L		%
Dilution factor	10.0		10.0		
Vinyl chloride	4600	Е	4800	E	4.3
1,1-Dichloroethene	13	J	13	J	0.0
trans-1,2-Dichloroethene	13	J	13	J	0.0
cis-1,2-Dichloroethene	11000	Е	11000	Е	0.0
CLP Sample No.	ETFH6I)L	ETFH7D	L	
Dilution factor	100.0		100.0		
Vinyl chloride	5200		5500		5.6
cis-1,2-Dichloroethene	10000		11000		9.5

18. OVERALL ASSESSMENT

The following samples have one or more target compounds with concentrations that exceed the volatile calibration range. Samples were properly diluted. Concentrations are reported from the dilutions with their associated dilution factor.

ETFH2, ETFH4, ETFH6, ETFH7, ETFK0 Vinyl chloride, cis-1,2-Dichloroethene

ETFH5

Vinyl chloride

ETFH8

cis-1,2-Dichloroethene

ETFJ8

Vinyl chloride, cis-1,2-Dichloroethene, Trichloroethene

Manual integrations were performed for some of the samples due to a "peak integrated by software incorrectly" according to the laboratory narrative. These manual integrations were reviewed by the reviewer and appear to be acceptable without additional qualifications.

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Case No: 48662
Site Name: Outboard Marine Corporation (IL)
Page 7 of 7
SDG No: ETFM1
Laboratory: EQI

Validation Data Qualifier Sheet

<u>Qualifiers</u>	<u>Data Qualifier Definitions</u>
U	The analyte was analyzed for and was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the results may be biased high.
J-	The result is an estimated quantity, but the results may be biased low.
NJ	The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.
UJ	The analyte was analyzed for and was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
С	The target Pesticide or Aroclor analyte identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).
X	The target Pesticide or Aroclor analyte identification was not confirmed when GC/MS analysis was performed.

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	01/08/20
SUBJECT:	Review of Data Received for review on 12/10/19
FROM:	Timothy Prendiville, Supervisor, Chief (SR-6J) Superfund Contract Management Section
то:	Data User: <u>Jacobs</u> Email address: <u>kaitlin.ma@jacobs.com</u>
	LEVEL 3 DATA VALIDATION
We have rev	iewed the data for the following case:
SITE NAME	: Outboard Marine Corp. (IL)
CASE NUM	BER: 48662 SDG NUMBER: METFF2
Number and	Type of Samples: _19 waters (metals)
Sample Num	bers: <u>METFF2-F9, G0-G2, G7, J3-J4, K4-K5, L1-L3</u>
Laboratory: Chemtex Hrs. for Review:	
Following ar	e our findings:

CC: Howard Pham Region 5 TPO Mail Code: SA-5J Case: 48662 SDG: METFF2 Page 2 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Nineteen (19) water samples, numbered METFF2-F9, G0-G2, G7, J3-J4, K4-K5, L1-L3, were collected on December 2 and December 3, 2019. The lab received the samples on December 4, 2019 in good condition. All samples were analyzed for metals. All samples were analyzed using the CLP SOW ISM02.4 analysis procedures and reviewed according to the January 2017 NFG for ISM02.4 (EPA-540-R-2017-001).

The inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

Reviewed by: Leeza Cooper Date: December 12, 2019

Case: 48662 SDG: METFF2 Page 3 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

1. HOLDING TIME:

No defects were found.

2. CALIBRATIONS:

No defects were found for the calibrations.

3. BLANKS:

No defects were found for the preparation blank or ICB/CCBs.

No samples were identified as field blanks.

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

No defects were found for matrix spike or laboratory control samples.

5. LABORATORY AND FIELD DUPLICATE:

No defects were found for the laboratory duplicate samples.

METFF2/F3 are field duplicates. No defects were found for the field duplicate samples.

6. ANALYSIS:

No defects were found for the serial dilution or ICS samples.

7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method detection limit (MDL) but below the quantitation limit (CRQL).

Results are qualified "J".

Arsenic

METFF2, METFF3, METFF4, METFF9, METFG2, METFK4, METFK5, METFL1

Iron

METFG0, METFK5

All data, except those qualified above, are acceptable.

Reviewed by: Leeza Cooper Date: December 12, 2019

Case: 48662 SDG: METFF2 Page 4 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

EXES ISM02.4 Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Reviewed by: Leeza Cooper Date: December 12, 2019

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	01/06/20
SUBJECT:	Review of Data Received for review on 12/12/19
FROM:	Timothy Prendiville, Supervisor, Chief (SR-6J) Superfund Contract Management Section
то:	Data User: <u>Jacobs</u> Email address: <u>kaitlin.ma@jacobs.com</u>
	LEVEL 3 DATA VALIDATION
We have revi	iewed the data for the following case:
SITE NAME	: Outboard Marine Corp. (IL)
CASE NUM	BER: 48662 SDG NUMBER: METFG3
Number and Type of Samples: _18 waters (metals)	
Sample Numbers: <u>METFG3-G4, G9, H0-H1, J1-J2, K2-K3, K6-K7, L6-L7, M0, M6-M7, N0-N1</u>	
Laboratory:	Chemtex Hrs. for Review:
Following are our findings:	

CC: Howard Pham Region 5 TPO Mail Code: SA-5J Case: 48662 SDG: METFG3 Page 2 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Eighteen (18) water samples, numbered METFG3-G4, G9, H0-H1, J1-J2, K2-K3, K6-K7, L6-L7, M0, M6-M7, N0-N1, were collected on December 4, 2019. The lab received the samples on December 5, 2019 in good condition. All samples were analyzed for metals. All samples were analyzed using the CLP SOW ISM02.4 analysis procedures and reviewed according to the January 2017 NFG for ISM02.4 (EPA-540-R-2017-001).

The inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

Reviewed by: Leeza Cooper Date: December 31, 2019

Case: 48662 SDG: METFG3 Page 3 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

1. HOLDING TIME:

No defects were found.

2. CALIBRATIONS:

No defects were found for the calibrations.

3. BLANKS:

No defects were found for the preparation blank or ICB/CCBs.

No samples were identified as field blanks.

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

No defects were found for matrix spike or laboratory control samples.

5. LABORATORY AND FIELD DUPLICATE:

No defects were found for the laboratory duplicate samples.

METFG9/H0 and METFL6/L7 are field duplicates. No defects were found for the field duplicate samples.

6. ANALYSIS:

No defects were found for the serial dilution or ICS samples.

7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method detection limit (MDL) but below the quantitation limit (CRQL).

Results are qualified "J".

Arsenic

METFG3, METFG4, METFG9, METFH0, METFH1, METFJ1, METFJ2, METFK3, METFK6, METFK7, METFL6, METFL7, METFN0, METFN1

Iron

METFG3

Manganese

METFJ2

All data, except those qualified above, are acceptable.

Reviewed by: Leeza Cooper Date: December 31, 2019

Case: 48662 SDG: METFG3 Page 4 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

EXES ISM02.4 Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Reviewed by: Leeza Cooper Date: December 31, 2019

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	01/06/2020
SUBJECT:	Review of Data Received for review on 12/17/19
FROM:	Timothy Prendiville, Supervisor, Chief (SR-6J) Superfund Contract Management Section
то:	Data User: Jacobs Email address: kaitlin.ma@jacobs.com
	LEVEL 3 DATA VALIDATION
We have rev	iewed the data for the following case:
SITE NAME	: Outboard Marine Corp. (IL)
CASE NUM	BER: 48662 SDG NUMBER: METFG8
Number and	Type of Samples: 20 waters (metals)
Sample Num	bers: <u>METFG8, H2-H8, J8-J9, K0-K1, L4-L5, L8-L9, M2-M3, N2-N3</u>
Laboratory:	Chemtex Hrs. for Review:
Following ar	e our findings:

CC: Howard Pham Region 5 TPO Mail Code: SA-5J Case: 48662 SDG: METFG3 Page 2 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) water samples, numbered METFG8, H2-H8, J8-J9, K0-K1, L4-L5, L8-L9, M2-M3 and N2-N3, were collected between December 2 and December 5, 2019. The lab received the samples on December 4 and December 5, 2019 in good condition. All samples were analyzed for metals. All samples were analyzed using the CLP SOW ISM02.4 analysis procedures and reviewed according to the January 2017 NFG for ISM02.4 (EPA-540-R-2017-001).

The inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

Reviewed by: Leeza Cooper Date: January 2, 2020

Case: 48662 SDG: METFG3 Page 3 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

1. HOLDING TIME:

No defects were found.

2. CALIBRATIONS:

No defects were found for the calibrations.

3. BLANKS:

No defects were found for the preparation blank or ICB/CCBs.

No samples were identified as field blanks.

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

No defects were found for matrix spike or laboratory control samples.

5. LABORATORY AND FIELD DUPLICATE:

No defects were found for the laboratory duplicate samples.

METFH6/H7 and METFL4/L5 are field duplicates. No defects were found for the field duplicate samples.

6. ANALYSIS:

No defects were found for the serial dilution or ICS samples.

7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method detection limit (MDL) but below the quantitation limit (CRQL).

Results are qualified "J".

Arsenic

METFG8, METFH3, METFH8, METFJ8, METFL4, METFL5, METFL8, METFM2, METFM3

All data, except those qualified above, are acceptable.

Reviewed by: Leeza Cooper Date: January 2, 2020

Case: 48662 SDG: METFG3 Page 4 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

EXES ISM02.4 Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Reviewed by: Leeza Cooper Date: January 2, 2020

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V

DATE:	01/06/2020
SUBJECT:	Review of Data Received for review on 12/17/19
FROM:	Timothy Prendiville, Supervisor, Chief (SR-6J) Superfund Contract Management Section
то:	Data User: <u>Jacobs</u> Email address: <u>kaitlin.ma@jacobs.com</u>
	LEVEL 3 DATA VALIDATION
We have reviewed the data for the following case:	
SITE NAME: Outboard Marine Corp. (IL)	
CASE NUMBER: 48662 SDG NUMBER: METFM1	
Number and Type of Samples:15 waters (metals)	
Sample Num	bers: <u>METFG5-G6, H9, J0, J5-J7, K8-K9, L0, M1, M4-M5, M8-M9</u>
Laboratory: Chemtex Hrs. for Review:	
Following are our findings:	

CC: Howard Pham Region 5 TPO Mail Code: SA-5J Case: 48662 SDG: METFM1 Page 2 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Fifteen (15) water samples, numbered METFG5-G6, H9, J0, J5-J7, K8-K9, L0, M1, M4-M5, M8-M9, were collected between December 4 and December 6, 2019. The lab received the samples from December 5 through December 7, 2019 in good condition. All samples were analyzed for metals. All samples were analyzed using the CLP SOW ISM02.4 analysis procedures and reviewed according to the January 2017 NFG for ISM02.4 (EPA-540-R-2017-001).

The inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

Reviewed by: Leeza Cooper Date: January 6, 2020

Case: 48662 SDG: METFM1 Page 3 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

1. HOLDING TIME:

No defects were found.

2. CALIBRATIONS:

No defects were found for the calibrations.

3. BLANKS:

No defects were found for the preparation blank or ICB/CCBs.

No samples were identified as field blanks.

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

No defects were found for matrix spike or laboratory control samples.

5. LABORATORY AND FIELD DUPLICATE:

No defects were found for the laboratory duplicate samples.

METFJ6/J7 are field duplicates. No defects were found for the field duplicate samples.

6. ANALYSIS:

No defects were found for the serial dilution or ICS samples.

7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method detection limit (MDL) but below the quantitation limit (CRQL).

Results are qualified "J".

Arsenic

METFG5, METFG6, METFJ0, METFK8, METFK9, METFL0, METFM1, METFM4, METFM5, METFM8, METFM9

Iron

METFJ0

Manganese

METFM4

All data, except those qualified above, are acceptable.

Reviewed by: Leeza Cooper Date: January 6, 2020

Case: 48662 SDG: METFM1 Page 4 of 4

Site: Outboard Marine Corp.

Laboratory: Chemtex

EXES ISM02.4 Data Qualifier Sheet

<u>Qualifiers</u>	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Reviewed by: Leeza Cooper Date: January 6, 2020